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NINTH EDITION

Employee Training and Development

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Mc Graw Hill

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Ninth Edition

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EMPLOYEE TRAINING & DEVELOPMENT

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To two new family members: Callie Rae, my granddaughter, and Brittany, my daughter in-law. Also, kudos to my cats, Lucky, Chester, and Milo for politely hiding and not misbehaving during the family celebrations.

Preface

The first few days of March 2020, we all experienced something that shook our world: the COVID-19 pandemic. We became familiar with words and phrases like pandemic, shelter-in-place, stay-at-home orders, coronavirus, my bubble, flatten the curve, and social distancing. We adopted (forced in some cases) new practices including wearing masks, washing our hands, and cleaning surfaces we touched. Outside of our household, we had limited face-to-face contact with our friends and family. We had to attend sporting events, concerts, plays, and movies virtually, if they were still available. Online, we shopped, ordered groceries, and got meals delivered. We worked and took classes from home. The way we interacted with our classmates, teachers, and work colleagues and saw friends and family was through using web conferencing tools like Zoom and Microsoft Teams and apps like Facetime and Houseparty. We applauded the essential workers who risked their lives to care for those sickened by the pandemic or helped provide us with the goods and services we needed to cope and survive. Daily news reports showed the pain, suffering, loss of life, and loss of jobs the pandemic inflicted on us. Millions around the world and over 500,000 Americans died from the coronavirus. Hundreds of thousands more experienced its symptoms. Even though we may not have been infected with the virus, most of us have experienced anxiety, frustration, and sadness resulting from living through the pandemic. In addition to the pandemic, the United States also experienced riots, protests, deaths of Black men on the streets, verbal and physical attacks against Asian-Americans, and sexual harassment cases, which brought to our attention issues of economic and social justice, and feelings of inequity many were experiencing.

As vaccines become more widely available and administered and in many parts of the world coronavirus cases are declining, we are cautiously moving back to our normal lives. But there is no doubt that the events that occurred over the past year have personally influenced each of us. The events have also had an impact on company business models and work policies. From a training and development perspective, the pandemic showed how training and development can help companies reach their business goals and contribute to strategy. It also emphasized the need to be able to quickly design new training and reconfigure face-to-face training for new delivery methods. The pandemic has accelerated the transition from face-to-face in-person learning to digital learning and brought increased attention on digital and other skills that employees need. To train during the pandemic, companies reviewed current training programs and considered not only the extent to which they were necessary but how to ensure they facilitated learning. Companies looked for digital learning solutions including online learning, simulations, virtual reality, games, and virtual classrooms that provided the necessary environment for employees to learn (practice, feedback, meaningful, content and interactive). Given the pace of business, employees' often heavy workloads, and the potential continuation of remote working, employees will be unwilling or unable to sit through long training sessions. As a result, there is the continual need for training to be available in short modules that are accessible on an as-needed basis. The "new normal" for training likely will include a blended learning approach as companies will seek the best balance between private, self-paced, as-needed, and on-demand technology-based training and methods that allow interpersonal interaction among trainees and an opportunity to apply what they have learned online to issues and problems they are facing at work (such as classroom instruction or active learning).

The role of training goes beyond training program design. Effective instructional design remains important, but training managers, human resource experts, and trainers are increasingly being asked to create systems to motivate employees to learn, not only in programs but informally on the job; create knowledge and user-generated content such as videos; and share that knowledge and user-generated content with other employees in the company. There is increased recognition that learning occurs informally as well as via technology-aided training outside the boundaries of a formal training course. Developments in artificial intelligence and augmented reality applications for training and development are helping make this possible.

The events of 2020 also highlighted the continued importance of employee development and talent management. To remain competitive or to grow, companies need to develop employees' leadership and other skills needed for their current job and future roles. Many employees working from home during the pandemic spent time considering their short- and long-term career goals. They also questioned whether their employer was providing them with sufficient learning opportunities to reach their short- and long-term goals and ensure their future employability. Employees want to develop skills that not only are useful for their current jobs, but also are congruent with their personal interests and values. Also, as companies consider their work-life and remote work policies for the "new normal," they are trying to balance both business demands and employees' interests and needs.

Learning and development teams play a large role in designing company's diversity, inclusion, and equity efforts. This includes not only developing relevant training such as unconscious bias training and ally training but also putting in place management policies and practices related to recruitment, development, and compensation that support diversity, inclusion, and equity. Also, diversity, inclusion, and equity efforts need to include vendors, suppliers, educational and nonprofit organizations, and the communities where the business operates.

The chapter coverage of *Employee Training and Development* reflects the traditional as well as the broadening role of training and development in organizations. **Chapter One**, "Introduction to Employee Training and Development," covers the role of training and development in companies. **Chapter Two**, "Strategic Training," discusses how training practices and the organization of the training function can support business goals. Because companies are interested in reducing costs, the amount of resources allocated to training is likely to be determined by the extent that training and development activities help the company reach business goals. Topics related to designing training programs are covered in **Chapters Three** through **Six**. **Chapter Three**, "Needs Assessment," discusses how to identify when training is appropriate. **Chapter Four**, "Learning and Transfer of Training," addresses the learning process and characteristics of a learning environment. The chapter also emphasizes what should be done in the design of training and the work environment to ensure that training is used on the job. **Chapter Five**, "Program Design," provides practical suggestions regarding what can be done to facilitate learning and transfer of training before, during, and after a course or program. The role of knowledge management in facilitating learning and transfer of training is also discussed. **Chapter Six**, "Training Evaluation," discusses how to evaluate training programs. Here, the student is introduced to the concepts of identifying cost-effective training, evaluating the return on investment of training and learning, and determining if training outcomes related to learning, behavior, or performance have been reached. The emerging use of big data and analytics to show the relationship between learning and business results is also discussed. **Chapters Seven** and **Eight** cover training methods. **Chapter Seven**, "Traditional Training Methods," discusses presentational methods (e.g., lecture), hands-on methods (e.g., on-the-job training and behavior modeling), and group methods (e.g., adventure learning). **Chapter Eight**, "Technology-Based Training Methods," introduces new technologies that are being used in training. These technology-based training methods include e-learning, mobile learning, social media, simulations, serious games, massive open online courses (MOOCs), virtual reality, augmented reality (AR), artificial intelligence (AI), and blended learning. **Chapters Seven** and **Eight** both conclude by comparing training methods on the basis of costs, benefits, and learning characteristics.

Chapter Nine, "Employee Development and Career Management," introduces developmental methods (assessment, relationships, job experiences, and formal courses). In addition, the use of development plans to help employees succeed in their self-directed or protean careers is highlighted. Topics such as succession planning and onboarding are discussed. **Chapter Ten**, "Social Responsibility: Legal Issues, Managing Diversity, and Career Challenges," emphasizes the role that training plays in helping companies improve the communities where they are located by increasing the skill level of the workforce, helping provide jobs, and taking actions to help all employees grow and develop, regardless of their personal characteristics or career challenges. The chapter also discusses compliance with laws that affect training and development; training partnerships; managing diversity, equity, and inclusion; cross-cultural preparation; and how companies can help employees deal with career challenges such as balancing work and life, coping with career breaks such as taking time off for family or required military service, job loss, and retirement. Finally, **Chapter Eleven**, "The Future of Training and Development," looks at how training and development is evolving and might be different five or even ten years from now.

Employee Training and Development is based on my more than 35 years of teaching training and development courses to both graduate and undergraduate students. From this experience, I have realized that managers, consultants, trainers, and faculty working in a variety of disciplines (including education, psychology, business, and industrial relations) have contributed to the research and practice of training and development. As a result, the book is based on research conducted in several disciplines, while offering a practical perspective. The book is appropriate for students in a number of programs. It suits both undergraduate and master's-level training courses in a variety of disciplines.

DISTINCTIVE FEATURES

This book has several distinctive features. First, my teaching experience has taught me that students become frustrated if they do not see research and theory in practice. As a result, one distinctive feature of the book is that each chapter begins with a real-life vignette of a company practice that relates to the material covered in the chapter. Many examples of company practices are provided throughout the chapters. Each chapter ends with a real-life case and related questions that give students the opportunity to apply the chapter's content to an actual training or development issue.

A second distinctive feature of the book is its topical coverage. The chapters included in **Part Two**, "Designing Training," relate to training design (needs assessment, training methods, learning and transfer of training, and program design and evaluation). Instructional design is still the "meat and potatoes" of training. **Part Three**, "Training and Development Methods," covers the more exciting part of training and development—that is, training and development methods. But as the role of managers and trainers broadens, they are increasingly involved in helping all employees grow, develop, and cope with career challenges, as well as preparing high-potential employees for leadership positions. For example, managers and trainers need to understand employees' career needs; career paths; cross-cultural training; diversity, equity, and inclusion; job loss; and succession planning—topics that fall outside the realm of instructional design. These topics are covered in **Part Four**, "Social Responsibility and the Future."

The book begins with a discussion of the context for training and development. **Part One** includes chapters that cover the economic and workplace factors that are influencing trends in the training profession. One of these trends is that companies are emphasizing learning through formal training and development, knowledge management, and informal learning. In addition, these chapters discuss the need for training, development, and learning to become strategic (i.e., to contribute to business strategy and organizational goals). Why? In successful, effective training, all aspects of training—including training objectives, methods, evaluation, and even who conducts the training—relate to the business strategy. More and more companies are demanding that the training function and training practices support business goals; otherwise, training may be outsourced or face funding cuts. Although students in business schools are exposed to strategic thinking, students in psychology and education who go on to become trainers need to understand the strategic perspective and how it relates to the organization of the training function and the type of training conducted.

Not only has technology changed the way we live and the way work is performed, but it also has influenced training practices. As a result, one chapter of the book is devoted entirely to the use of technologies for training delivery and instruction, such as online learning, social media, mobile learning, gamification, virtual and augmented reality, and artificial intelligence.

The book reflects the latest "hot topics" in the area of training and development. Some of the new topics discussed in the book are agile instructional design, capability model for training professionals, digital learning, microlearning, microcredentials, augmented reality (AR), artificial intelligence (AI), chatbots, reverse mentoring, ally training, telepresence, learning experience platforms (LXP), and neurodiversity and accessible training. Each chapter contains the most recent academic research findings and company practices.

FEATURES DESIGNED TO AID LEARNING

Employee Training and Development provides several features to aid learning:

1. Each chapter lists objectives that highlight what the student is expected to learn in that chapter.
2. In-text examples and chapter openers feature companies from all industries, including service, manufacturing, retail, and nonprofit organizations.
3. Discussion questions at the end of each chapter help students learn the concepts presented in the chapter and understand potential applications of the material.
4. Important terms and concepts used in training and development are boldfaced in each chapter. Key terms are identified at the end of each chapter. These key terms are important to help the student understand the language of training.
5. Application assignments are useful for the students to put chapter content into practice. Most chapters include assignments that require the student to use the World Wide Web.
6. Cases at the end of each chapter and at the end of each of the four parts of the book help students apply what they have learned to training and development issues faced by actual companies.
7. Name and subject indexes at the end of the book help in finding key people and topics.

WHAT'S NEW IN THE NINTH EDITION

I want to personally thank all of you who have adopted this book! Based on the comments of the reviewers of the eighth edition and training research and practice, I have made several improvements. Some important changes in the ninth edition of *Employee Training and Development* stand out:

- Each chapter has been updated to include the most recent research findings and new best company practices. New examples have been added in each chapter's text.
- All the chapter opening vignettes are new or updated. For example, the opening vignette for **Chapter Eight** highlights how Infosys created Lex, a user-friendly learning platform that offers thousands of courses and content internally developed as well as purchased from training vendors. Employees can search Lex for training on topics they know they want to learn. Lex can also provide recommendations based on employees' interests, current position, or career goal.
- This edition offers new and expanded coverage of topics related to training for nontraditional employees, learning, program design, training methods, evaluation, development, and the future of training.
- From the learning and program design perspective, expanded and new coverage is provided on agile instructional design, digital learning, use of learning councils in needs assessment, microlearning, and root cause analysis. Also, new coverage is provided for opening a training session; leading a discussion during training; matching learner-learner, learner-content, and learner-instructor interaction based on training content; converting face-to-face training to online learning; creating inclusive and accessible training; and training international audiences. There is also expanded and updated coverage of online learning, simulations, virtual reality (VR), serious games, augmented reality (AR), training applications of artificial intelligence (AI), and chatbots.

- From a development and career perspective, this edition provides new and expanded coverage of managing diversity, equity, and inclusion; melting the glass ceiling; coping with career breaks; and reverse mentoring.
- In training evaluation, the fundamentals remain important, but there is also an increased interest in and use of big data and workforce analytics to show how learning, training, and development contribute to talent management and the company's "bottom line." As a result, in the evaluation chapter, we include a new discussion of impact analysis for identifying training outcomes and human capital reporting standards.
- Finally, new technologies have the potential to radically alter how and when we learn and provide support for learning. Also, because companies need to change and quickly adapt means the instructional design process needs to be rapid, effective, and meet stakeholders needs. As a result, the last chapter of the book now discusses the implications of artificial intelligence, automation and robotics on employees' digital literacy and other skills, telepresence, learning experience platform (LXP), and the use of design thinking and lean management principles in agile instructional design.
- We discuss briefly about generational differences and learning styles and the lack of research supporting their conclusions.
- Each chapter ends with discussion questions and application assignments, many of which are new or have been updated for this edition.
- Each chapter concludes with new brief cases that illustrate a training, development, or learning issue faced by a company. The case questions ask students to consider issues and make recommendations based on the chapter content.
- To help students better understand the connections between topics, the book is organized into four different parts. **Part One** focuses on the context for training and development and includes a chapter devoted to strategic training. **Part Two** includes coverage related to the fundamentals of designing training programs. Chapters in **Part Two** focus on needs assessment, learning theories and transfer of training, program design, and training evaluation. **Part Three** focuses on training and development methods and includes chapters devoted to traditional training methods, e-learning, and the use of new training technologies such as social media and mobile learning. The chapters in **Part Four** cover employee development and career management and the role of training and learning in helping companies increase their social responsibility. This includes following laws and regulations that relate to training, as well as managing diversity and helping employees cope with career challenges such as balancing work and life, career breaks, identifying and moving along a career path, preparing for retirement, and coping with job loss. Finally, this part provides a look at the future of training and development.
- Each part includes a new case designed to help students apply what they have learned in the chapters to a real company issue.

INSTRUCTOR AND STUDENT RESOURCES

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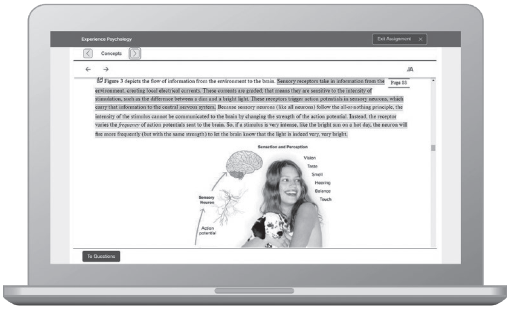

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Atlanta Technical College

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Raymond A. Noe is the Robert and Anne Hoyt Designated Professor of Management at The Ohio State University. Before joining the faculty at Ohio State, he was a professor in the Department of Management at Michigan State University and the Industrial Relations Center of the Carlson School of Management, University of Minnesota. He received a B.S. in psychology from The Ohio State University and M.A. and Ph.D. degrees in psychology from Michigan State University. Professor Noe conducts research and teaches all levels of students—from undergraduates to executives—in human resource management, training and development, performance management, and talent management. He has published articles in the *Academy of Management Annals, Academy of Management Journal, Academy of Management Review, Human Resource Development Quarterly, Journal of Applied Psychology, Journal of Management, Journal of Occupational and Organizational Psychology, Journal of Vocational Behavior*, and *Personnel Psychology*. Professor Noe is currently on the editorial boards of several journals, including *Journal of Applied Psychology, Personnel Psychology*, and *Journal of Management*. Besides *Employee Training and Development*, he has co-authored two other textbooks: *Fundamentals of Human Resource Management* and *Human Resource Management: Gaining a Competitive Advantage*, both published by McGraw-Hill/Irwin. Professor Noe has received awards for his teaching and research excellence, including the Herbert G. Heneman Distinguished Teaching Award, the Ernest J. McCormick Award for Distinguished Early Career Contribution from the Society for Industrial and Organizational Psychology, and the ASTD Outstanding Research Article of the Year Award. He is also a fellow of the Society of Industrial and Organizational Psychology.

Brief Contents

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Contents

Organization of this Book

This book is organized into five parts. **Part One** focuses on the context for training and development and begins with **Chapter One**, which offers a broad perspective on training and helps answer questions such as: What is training? Why is it important? Who is receiving training? How much money is spent on training? How should training be designed? **Part One** also includes **Chapter Two**, which discusses the strategic training and development process. In **Chapter Two**, you will see how a company's business strategy influences training practices and the organization of the training department. **Chapters Three** through **Six** make up **Part Two**. These chapters discuss the fundamentals of training design and address different aspects of the Instructional System Design (ISD) model, the model used to guide the development of training (see **Figure 1.2**). **Chapter Three** deals with how to determine training needs. **Chapter Four** discusses the important issue of learning—specifically, the importance of learning and transfer of training. The chapter emphasizes what we learn, how we learn, and how to create an environment conducive to learning within a training session. The chapter also discusses what needs to be considered for transfer of training (i.e., ensuring that skills emphasized in training are used on the job). **Chapter Five** provides insights into the specifics of how training programs should be designed to facilitate learning and transfer. The chapter covers the importance of room design, learning objectives, selecting and preparing trainers, and course planning for learning, as well as how managers, trainers, learners, and knowledge management can facilitate transfer of training. **Chapter Six** explains how to evaluate a training program. **Part Three** focuses on training and development methods. **Chapter Seven** looks at traditional training methods such as lecture, behavior modeling simulation, and role play. **Chapter Eight** examines e-learning and methods that have developed from applications of new technology, for example, web-based training, virtual reality, mobile learning, and social collaboration.

Chapter Nine addresses the important issue of employee development and career management; it discusses four approaches used to develop employee assessments, assignments, relationships, courses, and formal programs. **Part Four** considers training's role in social responsibility and the future of training and development. **Chapter Ten** deals with legal issues and diversity. Topics covered include ethics and legal issues, managing diversity, cross-cultural training, and issues relevant to certain employee groups, such as coping with career breaks and melting the "glass ceiling." **Chapter Eleven** discusses how new technologies may influence training and how its role may change in the future.

Students should be aware of several important features of the book. Each chapter begins with chapter objectives. These objectives (1) highlight what the student should learn from each chapter and (2) preview the topics. Next comes an opening vignette—an example of a company practice related to the chapter topics. Company examples are liberally used throughout each chapter to help students see how theory and research in training are put into practice. Each chapter ends with key terms, discussion questions, application assignments, and a short case. Key terms are related to important concepts emphasized in the chapter. Discussion questions and application assignments can facilitate learning through interacting with other students and actually trying to develop and conduct various training applications. Many application assignments require the use of the web, a valuable source of information on training practices. Each of the parts concludes with a case that highlights a company's training and development practices. These cases include questions asking you to apply what you have learned in the chapters.

PART ONE

The Context for Training and Development

Part One focuses on issues related to the context for training and development. **Chapter One**, "Introduction to Employee Training and Development," discusses why training and development are important to help companies successfully compete in today's business environment. The chapter provides an overview of training practices, the training profession, and how to design effective training (a topic that is covered in detail in **Part Two**, "Designing Training"). **Chapter Two**, "Strategic Training," discusses the strategic training and development process, organizational characteristics that influence training, various models for organizing the training department, how to brand training and market it to the rest of the company, and the advantages and disadvantages of outsourcing training.

Part One concludes with a case that highlights how Amazon is using learning strategically to cope with the forces and challenges influencing today's workplace.

CHAPTER ONE

Introduction to Employee Training and Development

Objectives

After reading this chapter, you should be able to

1-1 Discuss the forces influencing the workplace and learning, and explain how training can help companies deal with these forces.

1-2 Draw a figure or diagram and explain how training, development, informal learning, and knowledge management contribute to business success.

1-3 Discuss various aspects of the training design process.

1-4 Describe the amount and types of training occurring in U.S. companies.

1-5 Discuss the capabilities training professionals need.

1-6 Identify appropriate resources (e.g., journals, websites) for learning about training research and practice.

Forces Affecting the Workplace Make Training a Key Ingredient of Company Success

Customer service, employee retention and growth, the economy and the effects of the global coronavirus pandemic, a diverse workforce, the need to upskill employees, and extending learning beyond the classroom—these are just some of the issues affecting companies in all industries and sizes and influencing training and development practices. The five companies discussed below—Earls, PwC, Paychex, GTT Communications, and Abbott Laboratories—show how these concerns have affected companies in several different business sectors and how training and development have helped them succeed.

Earls is a family owned premium casual dining chain of restaurants across the United States and Canada. During the pandemic, Earls invested in virtual learning for all of its 6,500 employees. The training focused on the skills the kitchen crew and servers need to keep themselves and customers safe (and satisfied) during the pandemic. The skills included how to best utilize space in a small kitchen, interact with customers while wearing a face mask, use proper manners in greeting customers, and help customers use table-top technology to order meals.

PwC, an accounting and professional services firm, invested in a digital upskilling program to develop its employees. The program evolved from the company's recognition that they needed to be able to use technology to change how PwC employees worked and served their clients. The program is sponsored and supported by the business and collaboratively designed with leaders and the human resource function. The company invested $3 billion into training for its 275,000 employees around the world to help ensure they have the skills they need to compete in the growing digital economy. PwC offers 12 badges in a diverse range of digital skills including human-centered design, analytics, artificial intelligence, and data visualization. Training is delivered in multiple ways including instructor-led, games, apps, and podcasts. This provides the opportunity for employees to choose the way they want to learn. Employees earn digital badges for each digital skill they master. To encourage employees to participate in the upskilling program, once each quarter PwC offers days dedicated to upskilling. PwC's global chairman also communicated to employees that if they participated in the upskilling program, they would have guaranteed future employment with the company.

Paychex, a provider of human resource, payroll, and benefits services, was already redesigning its learning programs for virtual settings when the COVID-19 pandemic hit. Virtual learning at Paychex involves offering engaging content and a good learner experience. For example, its sales training program includes self-paced e-learning modules, a dedicated learning coach who facilitates ongoing virtual coaching, and social learning. Sales reps use a video coaching app to practice, present, fail, and practice again key skills with their learning coach and manager. Other training is offered in 30 minute time periods followed by a game that gets trainees actively involved in learning.

GTT Communications, a provider of cloud networking services, is trying to meet millennials' and Generation Z employees' need for opportunities to grow and develop. New college graduates hired into its sales development program have the opportunity to quickly move into an account executive position. The program includes training and coaching from more experienced salespersons. GTT believes the program helps attract and retain talent in a competitive labor market.

Abbott Laboratories, a multinational company that develops health technologies to help us live better lives, values diversity of people, products, technologies, and geographies. The company believes that diverse perspectives and shared goals are necessary to inspire new ideas needed to solve today's health care challenges. As a result, Abbott invests money, time, and energy to ensure that the company's culture is inclusive and equitable. For example, its development program includes mentoring to help Black, Indigenous, and People of Color (BIPOC) and women get the experiences, exposure, and visibility needed to gain managerial roles. An executive sponsorship program for newly hired minority and female leaders provides career support. Abbott also offers a high school internship for young women and underrepresented students to encourage them to consider careers in science, technology, engineering, and math (STEM). Because of its efforts, Abbott has been recognized as an employer of choice for BIPOC. It has been on DiversityInc's list of Top Companies for Diversity from 2004 to 2020 and *Working Mother* magazine's 100 Best Companies for 20 consecutive years.

Sources: Based on J. Meister, "3 Ways HR Leaders Can Build New Capabilities During COVID-19," *Human Resource Executive* (May 6, 2020), from https://hrexecutive.com, accessed June 26, 2020; C. BasuMallick, "How PwC's Digital Upskilling Program Is Preparing Its Workers for the Future," *HR Technologist* (March 4, 2020), from www.hrtechnologist.com, accessed February 19, 2021; S. Firisen, "Embarking on a Digital Upskilling Journey to Drive Change," *UiPath* (August 25, 2020), from www.uipath.com, accessed February 19, 2021; S. Feloni, "If You Opt In, We Will Not Leave You Behind'—PwC's Global Chairman Announces a $3 Billion Investment in Job Training," *Business Insider* (September 30, 2019), from www.businessinsider.com, accessed February 19, 2021; J. Colletta, "Exploring the Virtual Future of L&D," *Human Resource Executive* (June 12, 2020), from https://hrexecutive.com, accessed June 26, 2020; "Training Top 125 2020: Paychex," *training* (March/April 2020), p. 45; "About Abbott" and "An Inclusive Culture," from abbott.com/careers/diversity-and-inclusion.html, accessed February 20, 2021; "No. 8: Abbott," *DiversityInc*, from divesityinc.com/abbott-2020, accessed February 20, 2021.

Introduction

The examples discussed in the chapter opener illustrate how training can contribute to companies' competitiveness. **Competitiveness** refers to a company's ability to maintain and gain market share in an industry. Although they are different types of businesses, these five companies have training practices that have helped them gain a **competitive advantage** in their markets. That is, their training practices have helped them grow the business and improve customer service by providing employees with the knowledge and skills they need to be successful.

Companies are experiencing great change due to new technologies, rapid development of knowledge, globalization of business, and development of e-commerce. To remain competitive in this environment, companies must take steps to attract, retain, and motivate their workforces. Training is not a luxury; it is a necessity if companies are to participate in the global and electronic marketplaces by offering high-quality products and services. Training prepares employees to use new technologies, function in new work systems such as virtual teams, and communicate and cooperate with peers or customers who may be from different cultural backgrounds.

Human resource management refers to the policies, practices, and systems that influence employees' behavior, attitudes, and performance. Human resource practices play a key role in attracting, motivating, rewarding, and retaining employees. Other human resource management practices include recruiting employees, selecting employees, designing work, compensating employees, and developing good labor and employee relations. **Chapter Two**, "Strategic Training," details the importance placed on training in comparison to other human resource management practices. To be effective, training must play a strategic role in supporting the business.

Human resource management is one of several important functions in most companies. Other functions include accounting and finance, production and operations, research and development, and marketing. Keep in mind that although human resource management practices (such as training) can help companies gain a competitive advantage, the company needs to produce a product or provide a service that customers value. Without the financial resources and physical resources (e.g., equipment) needed to produce products or provide services, the company will not survive.

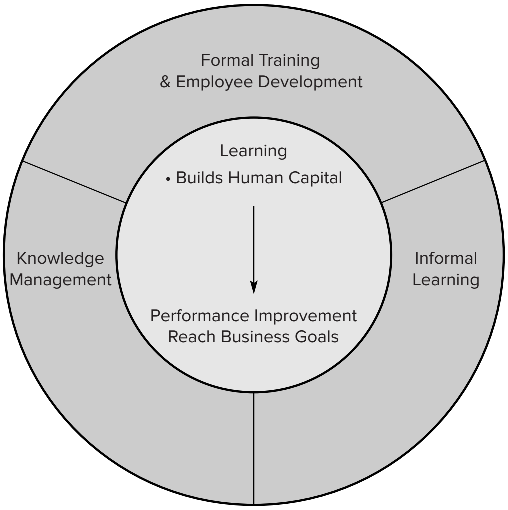
This chapter begins by defining training and development and discussing how the training function has evolved. Next, the forces that are shaping the workplace and learning are addressed. These forces influence the company's ability to successfully meet stakeholders' needs. The term **stakeholders** refers to shareholders, the community, customers, employees, and all the other parties that have an interest in seeing that the company succeeds. The discussion of the forces shaping the workplace (including technology, globalization, and attracting and winning talent) highlights the role of training in helping companies gain a competitive advantage.

The second part of the chapter focuses on current trends in training practices. This section also introduces you to the trainer's role in a business and how the training function is organized. This section should help you understand current training practices, the types of jobs that trainers may perform, and the capabilities needed to be a successful trainer (or, if you are a manager, the capabilities needed to identify a successful trainer). The chapter concludes with an overview of the topics covered in the book.

Training and Development: Key Components of Learning

Our focus in this book is to help you understand the role of training and development in today's organizations. To do this, it is important for you to understand what training and development means in the broader business context. **Figure 1.1** shows the role of training and development for the business. The overall goal of training and development is learning. **Learning** refers to employees acquiring knowledge, skills, competencies, attitudes, or behaviors. But the focus of training and development is not just on employees learning for its own sake. Today, merely offering training programs is not enough to get support and funding from executives and to establish the credibility of the training and development function to managers and employees.

FIGURE 1.1 The Business Role of Training and Development



Learning needs to demonstrate how it contributes to the company's competitive advantage through improving employee performance, supporting the business strategy (such as growing the business), and contributing positively to business outcomes such as quality, productivity, development of new products, and retaining key employees. From a company's perspective, what employees learn contributes to the development of intangible assets such as human capital. **Human capital** refers to knowledge (know what), advanced skills (know how), system understanding and creativity (know why), and motivation to deliver high-quality products and services (care why).[1] Human capital may be more valuable than physical capital (equipment or technology) or financial capital (monetary assets, cash) for providing a company with an advantage over its competitors, because it is difficult to imitate or purchase and it is unique to the company.

There are a number of different ways that learning occurs in a company. They are represented on the outside of the circle in **Figure 1.1**. **Training** refers to a planned effort by a company to facilitate learning of job-related competencies, knowledge, skills, and behaviors by employees. The goal of training is for employees to master the knowledge, skills, and behaviors emphasized in training and apply them to their day-to-day activities. Traditionally, companies have relied on formal training through a course, program, or "event" to teach employees the knowledge, skills, and behaviors they need to successfully perform their job. Development is similar to training, except that it tends to be more future-focused. **Development** refers to training as well as formal education, job experiences, relationships, and assessments of personality, skills, and abilities that help employees prepare for future jobs or positions. We will discuss development in more detail in **Chapter Nine**, "Employee Development and Career Management." **Formal training and development** refers to training and development programs, courses, and events that are developed and organized by the company. Typically, employees are required to attend or complete these programs, which can include face-to-face training programs (such as instructor-led courses) as well as online programs. As you will see later in the chapter, U.S. companies invest billions of dollars in formal training.

Informal learning is also important for facilitating the development of human capital.[2] **Informal learning** refers to learning that is learner initiated, involves action and doing, is motivated by an intent to develop, and does not occur in a formal learning setting.[3] Informal learning occurs without a trainer or instructor, and its breadth, depth, and timing is controlled by the employee. It occurs on an as-needed basis and may involve an employee learning either alone or through face-to-face or technology-aided social interactions. Informal learning can occur in many different ways, including through casual unplanned interactions with peers, e-mail, informal mentoring, or company-developed or publicly available social networking websites such as Twitter or Facebook. The application of social media from a marketing strategy to a learning strategy and the availability of social networks, microblogs, and wikis allow employees easy access to social learning or learning through collaboration and sharing with one or two or more people.[4] One estimate is that informal learning may account for up to 75 percent of learning within organizations.

One reason why informal learning may be especially important is that it may lead to the effective development of *tacit* knowledge, which can be contrasted with *explicit* knowledge.[5] **Explicit knowledge** refers to knowledge that is well documented, easily articulated, and easily transferred from person to person. Examples of explicit knowledge include processes, checklists, flowcharts, formulas, and definitions. Explicit knowledge tends to be the primary focus of formal training and employee development. **Tacit knowledge** refers to personal knowledge based on individual experiences that is difficult to codify. The characteristics of formal training and development programs, such as the relatively short duration of classroom or online training and limited opportunities for practice, may limit the extent to which tacit knowledge can be acquired. Thus, informal learning is central to the development of tacit knowledge because it involves employee interactions in personal relationships with peers, colleagues, and experts through which tacit knowledge is shared. It is important to recognize, however, that informal learning cannot replace formal training and employee development. Formal training and development are still needed to prepare employees for their jobs and to help them advance to future positions. Informal learning complements training by helping employees gain tacit knowledge that formal training cannot provide. In fact, research suggests that providing opportunities for formal training encourages employees to engage in follow-up informal learning.[6]

Knowledge management refers to the process of enhancing company performance by designing and implementing tools, processes, systems, structures, and cultures to improve the creation, sharing, and use of knowledge.[7] Knowledge management contributes to informal learning. Moneris is a Canadian company that provides payment processing and supporting technologies.[8] To obtain the skills they need, employees can use an online learning portal to access training courses on sales, leadership, and general business skills. After completing a course, employees can use the portal to share best practices and what they have learned. They can also post questions on a discussion board. This helps encourage employees to learn outside the boundaries of training courses by networking and collaborating with peers.

Many companies that recognize the value of learning have taken steps to ensure that formal training and employee development are linked to strategic business objectives and goals, use an instructional design process to ensure their effectiveness, and compare or benchmark the company's programs against competitors or other companies in the industry.[9]

Formal training and development, informal learning, and knowledge management should be encouraged and used together as part of a company's business strategy to develop human capital and improve performance. For example, consider the role of learning at BMO Financial Group.[10] During the past year, the talent development Team at BMO Financial Group has been piloting an innovative approach to informal learning that offers employees new ways to apply their skills and gain fresh career experiences. Called #HelpWanted, it is a virtual job board where managers can post short-term projects or challenges with which they need help and where employees can volunteer to take on gigs that match their skills. The talent development team vets the projects to ensure they align with program goals. Participants who engage in the projects complete surveys to share their perspectives, which help influence program strategy and direction. The team is ramping up the program to test it at scale, opening it up to more than 10,000 employees over the next year. BMO also offers formal training and development through BMO U. BMO U offers bite-size, high-quality content, such as podcasts, articles, videos, e-books, and a range of online courses. The company reports that employees like the variety of resources and the opportunity to follow curated learning pathways. For every resource, the talent development team posts an estimated time for completion up front, so employees can fit the learning into their busy schedules. Elements of social learning that are embedded in the digital platform have also helped with adoption. Employees can follow other users, track learning, and customize a personal news feed. The creation of employee groups around specific learning topics has generated the most engagement. Key ambassadors in each line of business lead and design those groups; they share relevant best practices and insights, answer employee questions, and host informal brainstorming sessions.

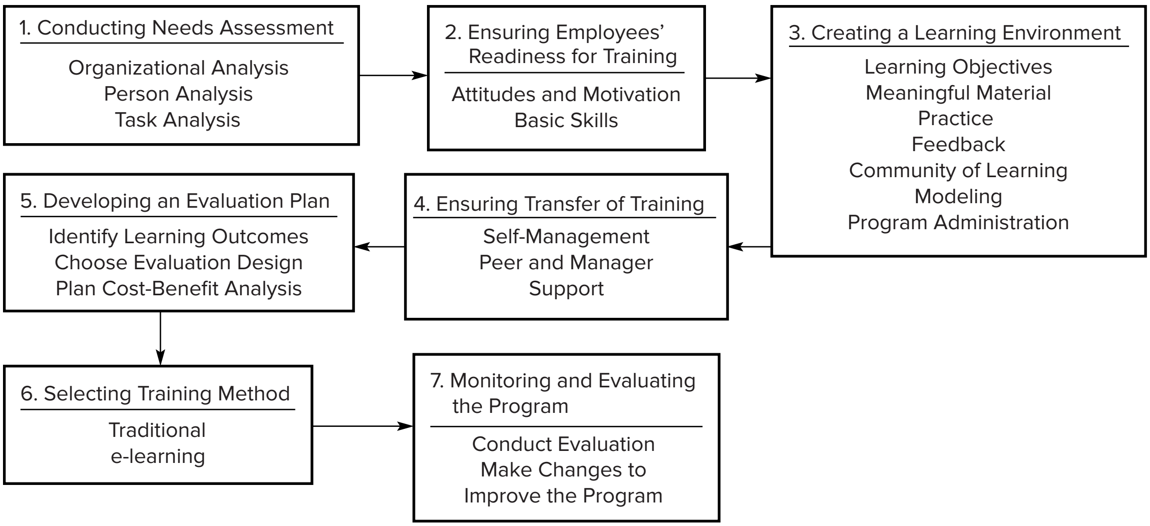
This discussion is not meant to underestimate the importance of "traditional training" (which focuses on the acquisition of knowledge, skills, and abilities), but it should alert you that, for many companies, training is evolving from a focus on skills to an emphasis on continuous learning and the creation and sharing of knowledge. This evolution of training is discussed in **Chapter Two**.

Designing Effective Training

The **training design process** refers to a systematic approach for developing training programs. **Figure 1.2** presents the seven steps in this process. Step 1 is a needs assessment, which is necessary to identify whether training is needed. Step 2 is to ensure that employees have the motivation and basic skills necessary to master the training content. Step 3 is to create a learning environment that has the features necessary for learning to occur. Step 4 is to ensure that trainees apply the training content to their jobs. This step involves having the trainee understand how to manage skill improvement, as well as getting co-worker and manager support.

Step 5 is to develop an evaluation plan. Developing an evaluation plan includes identifying what types of outcomes training is expected to influence (e.g., learning, behavior, or skills), choosing an evaluation design that allows you to determine the influence of training on these outcomes, and planning how to demonstrate how training affects the "bottom line" (i.e., using a cost-benefit analysis to determine the monetary benefits resulting from training). Step 6 is to choose the training method based on the learning objectives and learning environment. This step may include a traditional training method of face-to-face interaction with a trainer or e-learning using web-based training or mobile learning. Step 7 is to evaluate the program and make changes in it or revisit any of the earlier steps in the process to improve the program so that learning, behavior, change, and other learning objectives are obtained.

FIGURE 1.2 **Training Design Process**



The training design process shown in **Figure 1.2** is based on principles of Instructional System Design. **Instructional System Design (ISD)** refers to a process for designing and developing training programs. There is not one universally accepted instructional system development model. The training design process sometimes is referred to as the *ADDIE model* because it includes *a*nalysis, *d*esign, *d*evelopment, *i*mplementation, and *e*valuation.[11] In **Figure 1.2**, Step 1 (Conducting needs assessment) and Step 2 (Ensuring employees' readiness for training) are related to analysis. The next three steps—Creating a learning environment; Ensuring transfer of training; and Developing an evaluation plan—are design issues. Step 6 (Selecting and using a training method) relates to implementation. Step 7 (Monitoring and evaluating the program) relates to evaluation. Regardless of the specific ISD approach used, all share the following assumptions:[12]

- Training design is effective only if it helps employees reach instructional or training goals and objectives.
- Measurable learning objectives should be identified before the training program begins.
- Evaluation plays an important part in planning and choosing a training method, monitoring the training program, and suggesting changes to the training design process.

Keep in mind that designing training unsystematically will reduce the benefits that can be realized. Choosing a training method before determining training needs or ensuring employees' readiness for training increases the risk that the method chosen will not be the most effective one for meeting training needs. Also, training may not even be necessary and may result in a waste of time and money. Employees may have the necessary knowledge, skills, or behavior but simply lack the motivation to use them.

Trainers for AbsorbU, the internal college for ITU AbsorbTech, an industrial laundry service company, design courses using the ADDIE model.[13] AbsorbU focuses on learning needs related to customer service, production, leadership, and sales. AbsorbU trainers find that using the ADDIE model helps them to identify training needs and desired results and focus attention on knowledge transfer or behavior change. Also, they use ADDIE when they are revisiting courses to ensure that the content remains useful.

Overcoming the Flaws of the ISD Model

Some training professionals argue that the ISD model is flawed for several reasons.[14] First, in organizations, the training design process rarely follows the neat, orderly, step-by-step approach of activities shown in **Figure 1.2**. Second, in trying to standardize their own ISD method used in the training function, some organizations require trainers to provide detailed documents of each activity found in the model and seek approval that each step is done correctly before moving to the next one. This adds time and cost to developing a training program. Third, the ISD implies an end point: evaluation. However, good instructional design requires an iterative process of design, execution, evaluation, and reconsideration of the needs that the program was designed to meet, as well as the learning environment, the transfer of training, and all the other activities in the ISD process. Fourth, many companies claim to use an instructional design approach but dilute its application.[15] This might include assuming that training is the best solution without investigating other causes for performance gaps, failing to identify training objectives and results, focusing too much on the training method while ignoring the role of the work environment in transfer of training, and concentrating evaluation on whether trainees liked the program rather than measuring the impact of training on job performance or business results. Despite these criticisms, use of the ISD process is the best way to help ensure the effectiveness of training and development.

To overcome the limitations of the ISD model, companies are starting to use agile learning design. **Agile learning** or **agile instructional design** refers to any approach to training development that focuses on speed, flexibility, collaboration, repeated review, and reuse of existing content, if appropriate.[16] Course development occurs in what are known as "short bursts" or "sprints." There are likely several of these sprints involved for each part of a course. Each "sprint" includes planning, designing, developing, testing, deploying, reviewing, and launching.[17] The process starts again for each element of the course and ends when the entire course is complete. Designing training starts with a meeting between stakeholders, clients, creators, designers, and any other employees involved in the project. This meeting involves brainstorming, initial development of a design plan, and identification of course objectives. After the initial meeting development begins, and an example or prototype of one element of the course is created and sent to the stakeholders to test, review, and provide feedback. The course element is then changed according to feedback and test results. Course designers meet frequently, sometimes daily, during this phase to ensure that all team members understand their roles and that changes can be implemented quickly. This process is repeated for each element of a course until the entire course is completed. Once the course is completed, it is shown in rough form to the clients. The clients provide suggestions and feedback and the designers make changes. Once all necessary changes have been made, the course is ready for use.

It may be best to combine ISD or ADDIE and agile learning when designing training. For example, ADDIE can be used for the analysis and design phases. Then, the concepts and techniques of agile instructional design can be used to quicken the development, implementation, and evaluation phases.

Consider how Walmart's learning and development team uses agile principles.[18] Prior to using agile design, the team was segmented with a mix of instructional designer and project management roles supporting specific business areas. Courses took an average of 20 weeks to develop. Multiple teams worked independently to support the same business area. Development time varied from team to team as did how they measured the quality of their work. The starting point for using agile design involved learning and development providing resources to teams based on their skill sets and scheduling development work in a queue for the teams to complete. The use of agile principles reduced course development time to approximately an average of three weeks. Using the agile principles helped the learning and development team increase their ability to forecast training needs. This also helped them provide additional resources such as additional developers when needed rather than contracting with training experts from vendors and consulting firms.

The Forces Influencing Working and Learning

Table 1.1 illustrates the forces that influence working and learning. Globalization of business, demographic changes, new technologies, and economic cycles are some of the forces shown in **Table 1.1** that influence all aspects of our lives—how we purchase products and services, how we learn, how we communicate with each other, and what we value in our lives and on the job.[19] These forces are affecting individuals, communities, businesses, and society. To survive, companies must address these forces—with training playing an important role.

TABLE 1.1 Forces Influencing Working and Learning

Economic cycles
Globalization
Increased value placed on intangible assets and human capital
Focus on link to business strategy
Changing demographics and diversity of the workforce
Talent management
Customer service and quality emphasis
New technology
High-performance work systems

Economic Cycles

The global pandemic caused by COVID-19 caused the creation of a "new normal."[20] The "new normal" meant businesses had to quickly adapt their business models, supply chains, and ways to engage consumers or risk going out of business. Many companies retooled to provide products and services needed during the pandemic. For example, Dyson started to build ventilators and medical equipment and LVMH Moët Hennessy Louis Vuitton (LVMH) transformed its perfume production to produce hand sanitizer. Home became the place where we worked, studied, and ordered food, groceries, and other products and services we needed. Video conferencing technology such as Zoom became the way we interacted for work, school, and to socialize with friends and family. Having curfews and stay-at-home orders, wearing masks, washing our hands, and social distancing became the norm.

Economic data show the devastating impact the COVID-19 pandemic has had on the economy.[21] The U.S. economy in 2020 shrank for the first time since 2008. Consumer spending, which accounts for two-thirds of U.S. economic output, slowed to 2.5 percent. Due to the pandemic, the unemployment rate increased from a 50-year low of less than 4 percent in February 2020 to 15 percent—or more than 17 million workers—in April 2020. Job losses in 2020 were the worst since 1939. The hardest hit industries were hotels, restaurants, and related industries, which drove up unemployment among minorities, young, and less educated workers. Jobless claims—a proxy for layoffs—continues its post-pandemic decrease yet 348,000 workers filed for unemployment insurance in mid-August 2021. About 12 million people are receiving some type of unemployment benefits. The labor force participation rate (the share of Americans 16 years or older working or seeking work), which was at its lowest level in 20 years in March 2020, has slightly rebounded to above 61 percent.[22] Overall, the labor force participation rate decreased most significantly for women with children. This is likely because of women taking responsibility to provide child care due to the pandemic closing daycares and forcing school aged children to attend classes online from home.

The U.S. government, workers themselves, and companies all took actions to lessen the impact of the pandemic and prepare for post-pandemic employment. The government passed several pieces of legislation designed to aid workers and businesses. This legislation included increasing unemployment payments and extending unemployment benefits for an additional 13 weeks; providing $350 billion for loans for small business owners to cover expenses and loan forgiveness if they keep employees on payroll during the crisis; tax relief to businesses and individual taxpayers; and unemployment eligibility for independent contractors and the self-employed.[23]

Many workers who were furloughed, had their hours cut during the pandemic, or have been laid off but took a job paying less and requiring fewer skills than their previous position are involved in learning new skills needed for in-demand jobs.[24] For example, the pandemic caused increased demand and opportunities in fields such as cybersecurity, health care, and supply chain management. To learn new skills, workers are using online learning platforms. At LinkedIn Learning, downloads of classes in accounting, project management, and information technology increased more than 600 percent during the pandemic. Enrollment in professional certificate and microdegree programs at EdX, an online learning provider, also increased over six times during the pandemic. Merit America, which provides online training and support for individuals without a college degree, has seen increased demand for classes in technology support, software development, and advanced manufacturing. Microsoft is providing free online classes available to anyone to help train digital skills. The training will help prepare individuals for high demand and paying jobs such as help-desk technician, digital marketing, and data analyst. Companies are also providing opportunities for their workers to learn new skills to help ensure their future employability and economic security.[25] Postmates, the food delivery company, is partnering with EdX to give employees the opportunity to receive free virtual career guidance and access to more than 2,800 online courses. Postmates plans to continue to offer the educational benefit after the pandemic is over.

There has been some promising news that suggests the economy is slowly recovering.[26] The stock market set record highs and continues to climb despite the pandemic. The unemployment rate—dropped to 5.4 percent in July 2021 but remains well-above its February 2020 pre-pandemic level (3.5 percent). However, it remains to be seen if unemployment will return to 3.5 percent. Surveys suggest that some adults can not or are not interested in returning to work due to fears of getting Covid-19, the lack of child care, earning more in unemployment benefits than they would earn in available jobs, and not having the skills for available jobs or unwilling to switch careers. In the recession of 2008, long-term unemployment remained high for many years. Manufacturing, leisure, hospitality, and retail have added back many but not all of employees laid off due to the pandemic. Employment in blue-collar jobs such as construction, package delivery, residential housing, and warehousing is exceeding pre-pandemic levels. In fact, companies are facing a shortage of qualified workers with the skills needed for these jobs. The need for workers with skills for these jobs is due to increased online shopping during the pandemic, which is expected to continue, ramping up of business operation, and low mortgage rates, which are predicted to remain low. To attract and match workers with open jobs, companies are raising pay, touting career opportunities, flexible schedules, increasing the scope of the labor markets they recruit from, and utilizing employment alliances across industries.[27] For example, during the pandemic, companies needed workers in industries including health care, and grocery stores formed alliances with companies in industries such as airlines, hospitality, and retail to recruit workers who had been laid off. The pharmacy store chain Walgreens hired over 6,000 employees from 50 other employers including Kohls, Hilton, Gap, and the Chicago Cubs baseball organization.

The economy is slowly recovering as businesses fully reopen and consumers become more comfortable going out in public. Economic recovery and growth depend on four factors. First, is the vaccine's ability to contain the original virus and its variants. Second is whether consumer spending will increase. Consumer spending may be encouraged by The American Rescue Plan Act, which provides $1.9 trillion including aid to small business, extended unemployment benefits, and stimulus checks to eligible citizens.[28] Also, the economy will benefit if American households decide to spend some of the $1.8 trillion in savings it is estimated they have accumulated due to lack of spending during the pandemic.[29] A key consideration is whether factories can meet anticipated demand and bottlenecks in the supply chain can be smoothed out (you may have experienced the lack of products and empty shelves in many retailers and the difficulties of getting replacement parts). Third, workers need to return to the labor force with the skills needed to fill available jobs. Fourth is the economic impact of recent trade agreements and polices that resulted in tariffs placed on the products in many different industries. To fulfill the promise he made to bring jobs back to the United States, during his presidency Donald Trump renegotiated the North American Free Trade Agreement. He imposed tariffs on imports from China and the European Union.[30] Tariffs can make it easier for American-made goods to compete with cheaper foreign goods. However, the tariffs started a trade war and raised the prices of imports from those countries. President Joe Biden is also trying to keep American jobs from going overseas. In his campaign, he proposed a tax credit for U.S. companies that bring jobs back to the United States and a tax on profits for companies that build factories overseas. The United States and Europe recently agreed to suspend tariffs on products worth $11 billion including those imposed on jetlines, wine, luggage, produce, and other food items.[31] However, Biden is still planning to use tariffs to fight alleged unfair trade practices by China (such as using forced labor) that harm U.S. workers and pressure companies to share cutting-edge technologies.[32] Imposing laws and tariffs to artificially restrict job outsourcing could make U.S. companies less competitive. If they are forced to hire expensive U.S. workers, they would raise prices and increase costs for consumers. However, the relationship between trade, economic growth, and employment is complex, and it is influenced by factors such as currency exchange rates and government spending and taxation. In fact, the United States has had trade deficits during periods of economic expansion and recession, and under high and low employment. If the United States continues to enact tariffs and tough trade policies, other countries may retaliate by placing tariffs on U.S. imports. This could actually hurt and not help U.S. businesses. For example, U.S. manufacturers and suppliers, food and agribusiness, retailers, technology and technology communications, and footwear have all been negatively impacted by the retaliatory tariffs China placed on U.S. businesses in response to former President Trump's actions.[33] This includes companies such as Rockwell Automation, Johnson Controls, Dollar Tree, Best Buy, Macys, Deere and Company, and Del Monte foods. The tariffs have caused these companies to pass on increased costs to consumers and close plants due to lack of demand as China purchases products from countries who did not impose a tariff. One estimate is that the tariffs imposed by former President Donald Trump have cost American companies $46 billion since 2018, and the exports of goods affected by retaliatory tariffs have fallen sharply.

Globalization

Many companies are involved in international markets by exporting their products overseas, building manufacturing facilities or service centers in other countries, entering into alliances with foreign companies, and engaging in e-commerce. One estimate is that developing economies and emerging markets such as those found in the BRIC nations (Brazil, Russia, India, and China) are responsible for 18 percent of global trade.[34] Other countries such as Indonesia, Malaysia, South Korea, Nigeria, and Poland, which have a growing middle class, strong infrastructure, business-friendly regulations, and stable governments, are likely new emerging markets. It is important to note that global trade and investment has been slowed due to the pandemic, an increase in nationalistic policies around the world such as "Buy American" or "Made in India," concerns about national security threats from purchasing and selling technology, and countries' dependence on others for essential products and resources.[35] Globalization is not going to disappear. But the rate of globalization in the future is likely to depend on how soon the world can resolve the pandemic and the types of trade policies and practices enacted by countries around the world.

The importance of globalization can be seen in the recent hiring patterns of investments U.S. multinational corporations have made in China.[36] China's developed infrastructure and huge consumer market remain an essential market for many companies. General Motors now sells more cars in China than in the United States. In 2019, Tesla realized revenue of almost $3 million in China, an increase of over 69 percent. Due to attractive government incentives coupled with broad demand for electric vehicles in China, Tesla decided to expand its Shanghai factory and realized huge benefits. Yum! Brands, which includes KFC, Pizza Hut, and Taco Bell restaurants, is China's largest fast-food company. Yum! has over 84,000 restaurants in China and is opening about two new stores per day. In fact, 180 million Chinese belong to the KFC and Pizza Hut customer loyalty program! The menu in China is based on local tastes. For example, KFC fried chicken is sold by the piece so it can be part of a meal that includes rice rolls, egg tarts, and lotus soup. Pizza Hut includes the option to add Peking Duck to a pizza. Yum! has opened an innovation center in Shanghai to better understand customer preferences and develop new offerings for the Chinese market. Today, China is Starbucks' second largest and fastest-growing market, with more than 4,200 stores in 177 cities in mainland China, employing more than 57,000 employees.[37] Despite the economic fallout from COVID-19 in China, Starbucks continued to pay its employees there during the crisis, as well as offered mental health and sick day benefits, child care support, and more.

One of the lessons learned due to the pandemic has been the danger of over reliance on China. After the coronavirus was discovered, all factories located in China had to shut down. Some companies, like Hyundai and Fiat Chrysler, had no choice but to cease production outside of China too because they couldn't obtain essential components from China. While COVID-19 has exposed the over reliance of the western world on China, reshoring jobs and factories to the United States comes with huge costs—underdeveloped infrastructure; higher labor, health, and training costs; and more complex government regulations.[38] However, most U.S. companies manufacture in China for the Chinese market. Although there is some shifting of manufacturing away from China, this is mainly to Southeast Asia and India and not back to the United States.

Companies often place successful U.S. managers in charge of overseas operations, but these managers lack the cultural understanding necessary to attract, motivate, and retain talented employees. To cope with these problems, companies are taking actions to better prepare their managers and their families for overseas assignments and to ensure that training and development opportunities are available for global employees. Cross-cultural training prepares employees and their families to understand the culture and norms of the country to which they are being relocated and adjust to their home country after the assignment. Cross-cultural training is discussed in **Chapter Ten**. For example, McDonald's has over 39,000 locations in at least 100 countries.[39] To train future managers in the store operations, leadership, and staff management skills needed for global expansion to be successful, McDonald's has seven Hamburger Universities in the United States and abroad, including campuses in Oak Brook, Illinois; Sydney; Munich; London; Tokyo; São Paulo; and Shanghai. All provide training materials and tools in different languages and cultures. To successfully compete with its Indian rival, Ola, Uber is challenged to recruit and train a million new drivers in India, where most people do not drive or own a car, and few potential drivers understand English or how to use an app.[40] The stakes are huge given the market size: India has 1.2 billion people. Uber has recruited Indians driving taxis, buses, and rickshaws; private drivers working for companies and families; and individuals who have never driven before. To be successful in India, Uber has to teach new drivers how to speak politely, dress well, and follow traffic rules. They have to check to ensure recruits have necessary licenses and other documents, teach them how to use the Uber app, and instruct them in how to use online banking so they can see if they have been paid. Uber also helps drivers lease automobiles.

The pandemic, costs, and changes in countries' employment policies have caused companies to reconsider whether sending employees to work in other countries on a long-term basis is worthwhile.[41] For example, Gulf nations such as Oman and Saudi Arabia and Asian countries prefer to offer employment opportunities to their own citizens. Working overseas is less attractive from a financial perspective for citizens from Australia and the United Kingdom as they have less favorable tax policies than other countries. Also, potential candidates for overseas positions are less enthusiastic about working in more developing countries such as the Philippines and India where the same quality health care may not be available compared to their home country. Despite these issues, global companies will always need employees to work in overseas locations to help grow markets, manage the business, and provide expertise.

Globalization also means that employees working in the United States will come from other countries. Over 40 million people living in the United States were born in other countries, and approximately an equal number have a foreign-born parent. The United States has more immigrants than any other country in the world. More than one million immigrants come to the United States each year, and 6 out of 10 are relatives of U.S. citizens.[42] Immigrants and their descendants are projected to account for 88 percent of U.S. population growth through 2065, assuming current immigration trends continue. The top country of origin for new immigrants coming into the United States is China, followed by India, Mexico, and the Philippines. Nearly half of the nation's immigrants live in California, Texas, or Florida.

Over 75 percent of immigrants are in the United States legally. Mexico, China, and India are the leading countries of birth for lawful permanent residents or "green card" recipients, who may live and work anywhere in the United States. Another 13 percent come on work-related visas, some of which are available only for workers with exceptional qualifications in science, business, or the arts. The U.S. government also provides temporary visas to a limited number of highly educated workers, allowing them to work in the country for a set period of time but not to remain as immigrants.

In 2019, there were 28 million immigrants in the U.S. labor force, comprising 17 percent of the total.[43] Many U.S. industries, including high-technology, meat-packing, construction, farming, and service, rely on immigrants to perform jobs that U.S. citizens find undesirable because they require physical labor or pay low wages. But the percentage of highly skilled immigrants now exceeds the percentage of low-skilled immigrants. One reason is that U.S. colleges cannot keep up with the demand for employees needed for software development positions and others requiring science, technology, engineering, and math (STEM). To find engineers, companies have to look overseas to China, Japan, Korea, and India to hire them.[44] The H-1B visa program is for persons in highly skilled and technical occupations requiring completion of higher education. New visas are capped at 65,000 per year, 20,000 of which are reserved for employees with U.S. master's degrees. There is no cap on H-1Bs for employees working for the government, universities, and other nonprofit institutions. The largest number of H1-B visas are issued for computer-related occupations such as software development. Top companies for H-1B visas include Infosys Limited, Deloitte Consulting, Tata Consultancy, and IBM.[45] Indian-owned companies such as Tata Consultancy and Wipro have the most H1-B visa approvals. Other visa programs are available for lower-skilled temporary or seasonal workers (H2-A, H2-B) who are also in short supply. Many of these immigrants will have to be trained to understand the U.S. culture. Likewise, U.S. employees will need skills to improve their ability to communicate with employees from different cultures.

There is an ongoing debate in the U.S. government about the role of both legal and illegal immigration in terrorism and the reduction of job opportunities for U.S. citizens. However, survey results suggest a majority of Americans have positive views about immigrants.[46] About two-thirds of Americans say immigrants strengthen the country because of their work ethic and talent, while about a quarter say immigrants burden the country by taking jobs, housing, and health care.

American companies will likely continue to struggling to fill jobs despite the recent expiration of restrictions on work visas that occurred due to pandemic and Trump administration policies.[47] Despite the high unemployment rate because of the pandemic, potential workers are not attracted to the low paying and seasonal jobs typically held by immigrants. Companies that have managed to survive during the pandemic have had to cut back production, reduce hours, or send jobs overseas. For example, jobs in software development or information technology typically would be filled by employees with H1-B visas, but instead they were sent to workers in other countries. The CEO of SevenTablets, an information technology company, wanted to hire software engineers from foreign countries to work in the United States. Because H1-B visas were unavailable, he hired engineers to work from an India-based location of the company. The labor shortage is also affecting resorts and restaurants that rely on seasonal workers to fill jobs. Duck Donuts has several shops in North Carolina's Outer Banks. The owner typically hires about 75 foreign workers to staff the stores during peak demand during the summer months, but he has only been able to hire a few foreign workers. The lack of workers left many of his stores understaffed, and he had to reduce store hours despite a large number of summer customers. Ski resorts in Vermont typically employ both American and foreign workers. But the lack of visas have caused the resorts to close retail, lodging, and restaurants because of insufficient number of staff.

Globalization also means that U.S. companies have to carefully consider the costs and benefits of moving jobs overseas or using foreign suppliers. **Offshoring** refers to the exporting of jobs from developed countries, such as the United States, to countries where labor and other costs are lower. Argentina, Poland, Vietnam, Ukraine, Mexico, and the Philippines are some of the destination countries for offshored jobs. Why are jobs offshored?[48] The reasons given for offshoring factory and other jobs often include lower labor costs and the availability of a skilled workforce with a strong work ethic. For example, Nike has no manufacturing plants of its own but chooses to offshore the work to contractors in the Philippines, Vietnam, China, Indonesia, and Taiwan.[49] There are 500,000 people worldwide involved in the production of Nike footwear. The company's employees maintain stringent quality checks on these factories and Nike realizes cost savings in the process. Their sales revenues are around $3.7 billion. Converse and New Balance have a market share of 3 percent each. For them, their "Made in USA" tag is a critical part of their sales strategy, but due to higher costs, their revenues are approximately $280 million and $260 million respectively. Large pharmaceutical companies are working with overseas contract manufacturers to produce COVID-19 vaccine.[50] BioNTech SE has deals with contract manufacturers in Europe, and Modera is working with Lonza Group AG, a company based in Sweden.

Rather than offshoring work, reshoring or the return of jobs to the United States, is becoming more common. There are several reasons for this, including higher product shipping costs, fear of supply chain disruptions due to natural disasters and political instability, quality concerns, negative publicity, and customer preference for U.S.-made products.[51] Also, rising labor costs in some countries, such as China, are becoming more comparable to those in the United States. Finally, some countries' local standards for safety, health, and working conditions may be substantially lower than those in the United States, resulting in companies receiving negative publicity and turning off potential customers. For example, Zentech, an electronics company, began to notice that the cost of living and wages in China were rising.[52] It also began to receive cheap counterfeit products; a risk most companies live with when manufacturing in foreign nations. With two notable factors, it no longer made sense to have such a long distance between where the products were manufactured and where they were distributed. By transitioning all of its manufacturing to Baltimore, Maryland, the company increased jobs and made a higher quality product. With tens of thousands of manufactured products, Walmart decided to bring over 30 manufacturing plants (mostly in China) back to the United States. As part of its Walmart Initiative, the company's goal is to create over 300,000 jobs and U.S manufactured purchases by 2023.

Apple Inc. is known for introducing revolutionary and functional products such as the iPhone, the Mac Air computer, and the iPad.[53] Apple relies on manufacturing partners in Asia to build its products and has been criticized by labor groups who have challenged how its manufacturing partners in Asia have treated their employees. Apple has taken this criticism seriously and is auditing its suppliers and manufacturing facilities to take steps to reduce, if not eliminate, the illegal and poor treatment of workers who assemble or provide materials for any of its products. Apple's Suppliers Code of Conduct focuses on ensuring that its partners don't hire underage workers, provide adequate training and safe working conditions, and pay fair wages. In 2019, Apple performed over 1,100 supplier assessments in 49 countries. Over 19 million people have been trained in the workforce protections.

Increased Value Placed on Intangible Assets and Human Capital

Training and development can help a company's competitiveness by directly increasing the company's value through contributing to intangible assets. A company's value includes three types of assets that are critical for the company to provide goods and services: financial assets (cash and securities), physical assets (property, plant, equipment), and intangible assets. **Table 1.2** provides examples of intangible assets, which consist of human capital, customer capital, social capital, and intellectual capital. Human capital refers to the sum of the attributes, life experiences, knowledge, inventiveness, energy, and enthusiasm that the company's employees invest in their work.[54] **Intellectual capital** refers to the codified knowledge that exists in a company. **Social capital** refers to relationships among employees in the company. **Customer capital** refers to the value of relationships with persons or other organizations outside the company for accomplishing the goals of the company (e.g., relationships with suppliers, customers, vendors, and government agencies). Intangible assets are equally as valuable as financial and physical assets, but they are not something that can be touched and they are nonmonetary.

Intangible assets have been shown to be responsible for a company's competitive advantage. Several studies show that investments in training and development lead to increases in financial performance, productivity, and innovation.[55] The Association for Talent Development (ATD) found that companies that invested the most in training and development had a shareholder return that was 86 percent higher than companies in the bottom half and 46 percent higher than the market average.[56] Training and development have a direct influence on human and social capital because they affect education, work-related know-how and

TABLE 1.2 Examples of Intangible Assets

Human Capital
- Tacit knowledge
- Education
- Work-related know-how
- Work-related competence

Customer Capital
- Customer relationships
- Brands
- Customer loyalty
- Distribution channels

Social Capital
- Corporate culture
- Management philosophy
- Management practices
- Informal networking systems
- Coaching/mentoring relationships

Intellectual Capital
- Patents
- Copyrights
- Trade secrets
- Intellectual property

Sources: Based on L. Weatherly, *Human Capital–The Elusive Asset* (Alexandria, VA: SHRM Research Quarterly, 2003); E. Holton and S. Naquin, "New Metrics for Employee Development," *Performance Improvement Quarterly* 17 (2004), pp. 56–80; M. Huselid, B. Becker, and R. Beatty, *The Workforce Scorecard* (Boston, MA: Harvard University Press, 2005).

competence, and work relationships. Training and development can have an indirect influence on customer and social capital by helping employees better serve customers and by providing them with the knowledge needed to create patents and intellectual property.

As mentioned earlier in the chapter, intangible assets such as human capital also contribute to a company's competitive advantage because they are difficult to duplicate or imitate.[57] For CPS Energy, the country's largest public natural gas and electric company, teamwork and empowerment are key drivers of high performance. The San Antonio, TX-based utility focuses on "people first," both within the community it serves and for the employees who work for the organization. CPS's customer response unit consists of a dedicated group of workers who regularly visit customers during power outages, not only to restore power but to check in and make sure everyone is doing okay. The team also delivers meals to those in need during the holidays. Within the organization, the people-first mentality is evident in the company's mentorship and learning programs, which include an executive-in-residence program, in which employees spend up to two years working in a business area vastly different from their own and learning about different facets of the energy business. According to the company's CEO, giving employees the flexibility to seek different work experiences helps the entire organization operate at a higher level of performance.[58]

Chapters Seven, **Eight**, and **Nine** discuss specific training and development activities that contribute to the development of human and social capital. How to measure human capital is explained in **Chapter Six**, "Training Evaluation." The value of intangible assets and human capital has two important implications:

1. Employee engagement.
2. An increased emphasis on adapting to change and continuous learning.

Employee Engagement

To fully benefit from employee knowledge requires a management style that focuses on engaging employees. **Employee engagement** refers to the degree to which employees are fully involved in their work and the strength of their commitment to their job and the company.[59] Employees who are engaged in their work and committed to their companies give those companies a competitive advantage, including higher productivity, better customer service, and lower turnover.

Perhaps the best way to understand engagement is to consider how companies measure employee engagement. Companies measure employees' engagement levels with attitude or opinion surveys. Although the types of questions asked on these surveys vary from company to company, research suggests the questions generally measure themes such as pride in the company, satisfaction with the job, prospects for future growth with the company, and opportunity to perform challenging work.[60] How do we know if an employee is engaged? An engaged employee is passionate about his work, is committed to the company and its mission, and works hard to contribute. Engagement survey results show that only 39 percent of U.S. employees are engaged in their work, 47 percent are not engaged, and 14 percent are actively disengaged.[61] Actively disengaged employees cost the United States billions of dollars every year in lost productivity.

United Shore, a wholesale mortgage lending company with approximately 6,000 employees working at locations across the United States, retains more than 90 percent of its employees and 65 percent of all new team members come from referrals by other team members.[62] The company does offer an onsite escape room and incentive programs with the ability to earn gifts such as Cadillacs and cruises to the Bahamas. But the attraction and retention success is because employees know how much the company cares about them, their development, and their success. The company demonstrates this in daily team huddles, continuous improvement training, and monthly one-on-one coaching sessions. Team members average 236 hours of training and coaching from their trainers and leaders. The company investment in training and development helps employees progress in their careers (last year the company had almost 1,200 promotions).

Emphasis on Change and Continuous Learning

Change refers to the adoption of a new idea or behavior by a company. Change is due to companies experiencing volatility, uncertainty, complexity, and ambiguity (VUCA). Technological advances, changes in the workforce or government regulations, globalization, new competitors, and crises such as the COVID-19 pandemic, are among the many factors that contribute to VUCA.[63] VUCA requires employees to adapt to change often through acquiring new skills. For example, companies in financial services are experiencing VUCA due to changes including increasing providing customers with digital services such as mobile banking and the increased use of cryptocurrency.[64] Capital One, the financial services company, has implemented processes that automate employees' work. This requires employees to change from skills in transactional tasks to being more process-focused and problem solvers. They also need to acquire new knowledge necessary to understand machine learning and artificial intelligence because it was being integrated into all aspects of the company's operations. The characteristics of an effective change process are discussed in **Chapter Two**, "Strategic Training."

A changing environment means that all employees must embrace a philosophy of learning. A **learning organization** embraces a culture of lifelong learning, enabling all employees to acquire and share knowledge continually. Improvements in product or service quality do not stop when formal training is completed.[65] Employees must have financial, time, and content resources (such as courses, experiences, and development opportunities) available to increase their knowledge. Managers take an active role in identifying training needs and helping to ensure that employees use training in their work. Employees are actively encouraged to access learning resources and share knowledge with colleagues and other work groups across the company using discussion boards and social networking apps.[66] For example, AbbVie, the pharmaceutical company, wants to create a development-focused company because the scientists it employs are motivated to learn.[67] To drive performance and facilitate learning and development, the company's talent development professionals created Lean.Develop.Perform. (LDP). LDP is an annual weeklong series of live, interactive webinars for all employees. Topics focus on areas such as why careers fail, influential leadership, and feedback. The host of each webinar asks a company leader questions related to their own personal development and about the specific topic. Each session concludes with questions and answers. More than half of AbbVie's employees voluntarily participated in the program. The webinars are recorded, tagged, and made available to employees who could not attend them live or want to watch them again. Employees can easily search for and access related articles, development guides, podcasts, and other content related to each topic. This provides a learning resource that employees can access on an as-needed basis. Employees are very interested in the storytelling format and appreciate how easy it is to retrieve the webinars and supporting materials. AbbVie continues to provide new webinars and distributes e-mail reminders and information about registering to maintain employees' awareness of the learning events. To support the program, company leaders actively promote the webinars and host their own viewing parties. **Chapter Five**, "Program Design," discusses learning organizations and knowledge management in detail. For a learning organization to be successful, teams of employees must collaborate to meet customer needs. Managers need to empower employees to access learning resources, share knowledge, identify problems, and make decisions, which allows the company to experiment and improve continuously.

Focus on Link to Business Strategy

Given the important role that intangible assets and human capital play in a company's competitiveness, managers are beginning to see a more important role for training and development as a means to support a company's business strategy—that is, its plans for meeting broad goals such as profitability, market share, and quality. Managers expect training and development professionals to design and develop learning activities that will help the company successfully implement its strategy and reach business goals.

For example, the business success of Pal's Sudden Service, a regional fast-food chain, is built on speed, accuracy, and talent.[68] Pal's offers only takeout (no sit-down meals) at nearly 30 locations, building a reputation for tasty burgers, fries, and shakes delivered quickly. Customers place their order with an employee at a drive-up window and then go to another window on the other side of the building where a different employee hands customers their meals. Customers get exactly what they ordered because employees hand out the wrong food only once in every 3,600 orders (an error rate 10 times better than the average fast-food restaurant). Pal's accomplishes its speedy and error-free service by focus on training and measuring talent. First, the company targets character in hiring; it uses a homegrown, 60-question assessment based on successful team members' attitudes and personality traits. Those who fit the culture get hired and immediately enter 120 hours of training, and new hires must be certified for each job they'll perform before they can work alone. But at Pals training never ends. At every restaurant, every day, on every shift, a computer randomly selects up to four employees to take a recertification quiz on the skills required for one of their jobs. If the worker fails the quiz, they are required to retake training. Strategic training is discussed in greater detail in **Chapter Two**.

Changing Demographics and Diversity of the Workforce

In the United States the Bureau of Labor Statistics (BLS), an agency of the Department of Labor, tracks changes in the composition of the U.S. labor force and forecasts trends. Companies face several challenges as a result of increased demographics and diversity of the workforce. Population is the single most important factor in determining the size and composition of the labor force, which is composed of people who are either working or looking for work. The civilian labor force is projected to increase by 18 million between 2019 and 2029, reaching close to 171 million by 2029.[69]

Increase in Ethnic and Racial Diversity

Between 2019 and 2029, the U.S. labor force will continue to grow more ethnically and racially diverse due to immigration, increased participation of minorities in the workforce, and higher minority fertility rates. Between 2019 and 2029, the projected annual growth rates are higher for Hispanics (2.2 percent) than for Blacks and all other groups.[70] By 2029, the workforce is projected to be 75 percent white, 13 percent Black, and 12 percent Asian and all other ethnic groups. Twenty-one percent of the labor force will consist of individuals with an Hispanic origin. By 2029, 52 percent of the labor force will be men and 48 percent will be women. Not only must companies face the issues of race, gender, ethnicity, and nationality to provide a fair workplace, but they must also develop training programs to help immigrants acquire the technical and customer service skills required in a service economy.

Aging Workforce

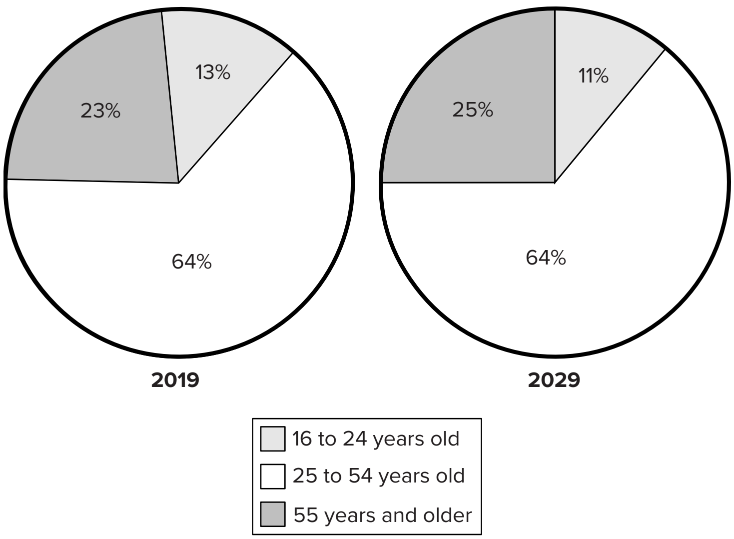
Figure 1.3 compares the projected distribution of the age of the workforce in 2019 and 2029. In 2019, baby boomers will be 58 to 71 years old, and this age group will grow significantly by 2029. The labor force will continue to age. The 55-and-older age group is expected to grow by approximately 5 million to 43 million in 2029, representing a 13 percent increase between 2019 and 2029.[71] By 2029, all baby boomers will be 65 or older. As a result, a large number of them will have moved out of the labor force. However, many will continue to work more years because individuals are leading healthier and longer lives than in the past, providing the opportunity to work more years. In addition, the high cost of health insurance and decrease in health benefits will cause many employees to keep working to maintain their employer-based insurance or will prompt them to return to work after retirement to obtain health insurance through their employer. Also, the trend toward pension plans based on individuals' contributions rather than years of service will provide yet another incentive for older employees to continue working.

The aging population means that companies are likely to employ a growing share of older workers—many of them in their second or third careers. Older people want to work, and many say they plan a "working retirement." Despite myths to the contrary, worker performance and learning in most jobs is not adversely affected by aging.[72] Older employees are willing and able to learn new technology. An emerging trend is for qualified older employees to ask to work part-time, or for only a few months at a time, as a means of transitioning to retirement. Employees and companies are redefining what it means to be retired to include second careers, as well as part-time and temporary work assignments.

Generational Differences: Fiction Not Fact?

Popular press suggests that five generations are represented in the workforce; each one may have unique and similar characteristics to the others. In **Table 1.3**, the year born, nicknames, and ages of each generation are shown. Consider some of the attributes that have been suggested to characterize each generation.[73] For example, Gen Z are supposedly more attached to mobile phones and tablets for learning and connecting with others than are millennials. Baby boomers, the "Me" generation, are characterized as being competitive, hard-working, and concerned with the fair treatment of all employees.

FIGURE 1.3 **Comparison of the Age of the 2019 and 2029 Labor Force**



Sources: Based on U.S. Bureau of Labor Statistics, "Employment Projections, Civilian Labor Force, by Age, Sex, Race, and Ethnicity," from www.bls.gov/emp/tables/civilian-labor-force-summary.htm, accessed February 13, 2021.

TABLE 1.3 **Generations in the Workforce**

Year Born	Generation	Ages
1925–45	Traditionalists	>76
1946–64	Baby boomers	57–75
1965–80	Generation X	41–56
1981–95	Millennials	26–40
1996–	Generation Z	<25

It is important to note that research does not support the existence of generational differences. That is, generational differences are more fiction than fact.[74] Members of the same generation are no more alike than members of the same gender or race. Also, research suggests that employees from different generations likely have more similarities than differences.[75] This means that you should not attribute differences in employee behaviors and attitudes to generational differences or expect all employees of a generation to have similar values, interests, or preferences (e.g., about what training method they want to use to learn). It is important to understand the needs, experiences, and preferences of learners but that should be based on an audience analysis (discussed in **Chapter Five**) rather than erroneous assumptions about generational differences.

Benefitting from Diversity, Equity, and Inclusion

The death of George Floyd, #MeToo, the Black Lives Matter movement, verbal and physical attacks against Asian-Americans, the multigenerational workforce, and the COVID-19 pandemic has intensified the attention to issues of diversity, equity, and inclusion in U.S. companies. What do diversity, equity, and inclusion mean?[76] **Diversity** can be considered any dimension that differentiates one person from another. For example, at Verizon, diversity means embracing differences and variety, including age, ethnicity, education, sexual orientation, work style, race, gender, and more. **Equity** refers to fair treatment, access, equality of opportunity, and advancement for all employees, while at the same time striving to identify and eliminate barriers that have prevented the full participation of some groups. **Inclusion** refers to creating an environment in which employees share a sense of belonging, mutual respect, and a commitment to others so they can perform their best work. Inclusion allows companies to capitalize on the diversity of employees as well as the diversity of customers, suppliers, and community partners. In an inclusive environment, employees feel safe to share their identities and to understand and ask about others' experiences of inequality. Company leaders in an inclusive company point out instances of inequality, explain their impact, and emphasize the changes that need to occur. They also demonstrate and recognize inclusionary behaviors in both their peers and other employees. Diversity, equity, and inclusion can help companies gain a competitive advantage. Important outcomes expected from diversity practices include improved public image of the company, improved financial bottom line, decreased complaints and litigation, and retention and recruitment of a diverse workforce.[77]

Consider the programs that Hershey and Goldman Sachs are offering to capitalize on diversity, equity, and inclusion.[78] Hershey developed a program called Abilities First for workers in manufacturing who have disabilities. It emphasizes equal pay, equal work, and equal expectations. One of the company's greatest successes has been converting many production lines to accommodate deaf workers. Supervisors and managers have been trained in sign language, and machines that were outfitted with bells and buzzers were adapted to use colored lights instead. Goldman Sachs Women's Career Strategies Initiative, Black Analyst and Associate Initiative, and Hispanic and Latino Analyst Initiative work to ensure a supportive environment by focusing on the networking and development opportunities for women and minority employees.

TD Bank Group is one company that is invested in managing its diverse workforce.[79] TD Bank employs every generation in its workforce of 85,000 employees consisting of 30,000 from the United States. TD Bank has a continuous learning culture that provides different ways of learning to meet employees' generational needs. To ensure all employees have the skills they need now and in the future, TD Bank focuses on general skills that all employees need, foundational skills in topics such as analytics and operational excellence, and targeted skills depending on employees' positions such as advanced analytics and digital marketing. TD Bank invests in inclusive leadership training for all of its people leaders to minimize the risk of unintentional bias. The training focuses on people leaders understanding their own inclusive behaviors and personal biases, the impact of their biases on others, and how to create an inclusive environment for all employees. Diversity and Inclusion (D&I) is emphasized in many learning programs. For example, the topic is covered in new employee onboarding. All employees are required to take a course called D&I at TD, which discusses how to be an effective employee, team leader, and company leader. TD also has "respectful workplace" training that helps employees understand how to create and maintain a work environment that doesn't include harassment or discrimination. It also reviews what employees should do if they see such behavior (such as report to their manager, HR, or the company's ethics hotline). The interview training for people leaders who recruit new employees emphasizes how to conduct inclusive recruiting.

In addition to training, TD engages in other practices to enhance diversity and inclusion. All people leaders' performance evaluations include diversity and inclusion performance goals, the company includes questions related to diversity and inclusion in its engagement survey, and checks are made to ensure that diverse candidates are included in hiring polls and considered in succession planning meetings used to identify current employees with leadership potential. TD's Women in Leadership network gives its female employees the chance to connect, encourage, and mentor each other. TD offers flexible work options to help employees achieve work-life balance. Lesbian, Gay, Bisexual, Transgender and Ally (LGBTA) resource groups enable employees to get involved in awareness and education, recruitment, mentoring, and community outreach for the LGBTA community. For employees with disabilities, TD tests new technology and partners with employees to ensure that they are comfortable with their accommodations. TD has an employee assistance program that helps veterans and their families move into civilian life and a leave program for its employees fulfilling military service obligations.

Although many U.S. companies have committed themselves to recognizing the diversity of their internal labor force, ensuring equity and inclusion, and using it to gain competitive advantage, some workers believe there is more work to be done, particularly those in underrepresented groups such as women, racial and ethnic minorities, and LGBTQ employees. Consider the results of several surveys.[80] In a global survey conducted by Boston Consulting Group, nearly 75 percent of individuals in these underrepresented groups said they do not believe they have personally benefited from their companies' diversity and inclusion programs. In another diversity and inclusion study conducted for Glassdoor, 60 percent of employees surveyed said they witnessed or experienced discrimination based on age, race, gender, or LGBTQ identity in the workplace. A survey by PricewaterhouseCoopers found that one-third of employees agree that diversity is a barrier to progression at their company. Diversity and inclusion will continue to be important topics that need to be discussed and addressed.

We will discuss diversity training, unconscious bias managing diversity, capitalizing on older workers skills and accommodating their needs, and providing training and development opportunities that appeal to a multigenerational workforce in more detail in **Chapter Ten**.

Talent Management

Talent management refers to the systematic, planned, and strategic effort by a company to use bundles of human resource management practices, including acquiring and assessing employees, learning and development, performance management, and compensation, to attract, retain, develop, and motivate highly skilled employees and managers. Talent management is becoming increasingly more important because of changes in demand for certain occupations and jobs, new skill requirements, the anticipated retirement of the baby boomer generation, and the need to develop knowledge workers and the managerial talent and skills of the next generation of company leaders. Also, the results of surveys suggest that opportunities for career growth, learning, and development and the performance of exciting and challenging work are some of the most important factors in determining employees' engagement and commitment to their current employer.[81]

Hitachi Vantara is an information technology company that provides hardware, software, and services to its clients.[82] Its mission is to recruit, hire, develop, and retain the best talent by building the skills and knowledge of its employees, partners, and customers. It needs to continue to do so as cloud computing, artificial intelligence, and the Internet of Things continue to shape information technology products and services. Hitachi encourages lifelong learning through offering courses to technical and sales employees to help them grow personally and professionally by earning certifications in the skills they need. Hitachi also provides customers and partners with technical product training, professional and leadership skills development programs, new hire boot camps, and access to virtual software and hardware labs.

Consider the importance and challenge of talent management for manufacturing companies trying to increase the supply of COVID-19 vaccines.[83] The pandemic has highlighted the war for talent as companies involved in producing vaccines have thousands of job openings but were competing for a limited number of workers who have pharmaceutical manufacturing or bio-tech degrees or willing to work overnight shifts on production lines. The CEO and senior executive of Emergent BioSolutions Inc., a COVID-19 vaccine subcontractor, tried to recruit potential hires at a virtual career fair. They were able to attract some employees to join the company. However, the company still needed to fill hundreds of positions including warehouse associates, quality assurance analysts, and a supply-chain management director. Catalent Inc. ran recruiting ads on Pandora to reach potential employees who live close to its manufacturing plants. They offered $3,000 bonuses to workers willing to work overnight shifts. Avid Bioservices expects to recruit 40 new employees. The new employees require 6 months of training focused on the company's manufacturing process and how it helps its clients.

Changes in Demand for Occupations and Jobs

Approximately 46.5 million job openings are expected, with more than three-fourths resulting from the need to replace workers who retire or leave an occupation.[84] Most new jobs added between 2019 and 2029 will be in service-providing occupations, particularly health care and social assistance. The occupations with the most new jobs projected between 2019 and 2029 include home health and personal care aids, software developers and software quality assurance analysts and testers, fast-food and counter workers, registered nurses, and restaurant cooks. Health care support occupations are projected to be the fastest-growing occupational groups and contribute the most new jobs (one out of four new jobs) from 2019 to 2029. From 2019 to 2029, employment in goods-producing occupations is expected to decline.

Table 1.4 shows 10 of the 30 fastest-growing occupations projected between 2019 and 2029. Of the 30 fastest-growing occupations, 13 are related to health care and related occupations (such as home health care aid, personal care aids, physician assistants, and nurse practitioners). Other occupations in the top 30 are energy-related or computer and information technology occupations. The growth in health care reflects the inpatient and outpatient medical care that is needed for the aging U.S. population. Computer and math-related occupations are expected to see job growth as the demand increases for cybersecurity, software to operate mobile and other technologies, and increased use of data-based decision making. The expected increase demand for alternative energy sources such as solar and wind will drive growth for energy occupations.

Skill Requirements

Several studies illustrate how jobs are changing, the influence this is having on skill requirements, and the difficulty companies are having finding qualified workers.[85] Skills shortages are occurring in manufacturing and service jobs and are expected to continue into the future. One estimate is that there will be 4.6 million U.S. manufacturing jobs, ranging from technician to researcher, to fill by 2028. But 2.4 million of them will go unfilled because of a shortage in skilled workers. One reason for this is the increased use of advanced technology to automate tasks and digital tools in work processes. The pace of adoption of advanced technology and digital tools was accelerated by the pandemic. Fifty percent of the manufacturers in the study have adopted technologies such as robots, machine learning, and artificial intelligence (AI). This has created a mismatch between the available workers and the skills necessary to fill open jobs. Manufacturing executives reported the skill sets they need now and in the future are technology/computer skills, digital skills, programming skills for robots/automation, and skills working with tools and technology. These skills are considered part of STEM skills, which are in short supply. **STEM skills** refer to skills in science, technology, engineering, and math. One estimate is that manufacturers spent at least $26 billion in 2019 on training programs for new and existing manufacturing employees to combat the skills gap. In addition to STEM skills, workers need to develop skills necessary to work together with technology or to perform jobs that are uniquely human and cannot be replaced with technology. These skills include critical thinking, creativity and originality, attention to detail, problem-solving, working with others, and self-management skills (such as active learning, resilience, stress tolerance, and flexibility).

Skill shortages are also occurring in three service industries that together employ almost one-third of all U.S. workers: retail; health and social assistance; and leisure and hospitality.[86] Roughly 6 in 10 service-sector workers in high-demand industries have only limited literacy skills. Limited skill levels are even more common in the areas of numeracy (understanding and working with numbers) and digital problem solving. Despite the workers' limited skills, jobs in these industries require them to use these skills. In fact, the demand for

TABLE 1.4 Examples of the Fastest-Growing Occupations

Employment Change 2019–2029				
Occupation	Number (rounded to nearest thousands)	Percent (%)	Most Significant Education or Training	Median Annual Wages, May 2019
Wind turbine service technicians	4	61%	Post secondary non degree; Long-term on the job training	$52,900
Nurse practitioners	111	57	Master's degree	109,820
Solar photovoltalic installers	6	35	High school diploma or equivalent; Short-term, on-the-job training	44,890
Statisticians	15	35	Master's degree equivalent	91,160
Occupational therapy assistants	16	34	Associate's degree	61,510
Home health and personal care aids	1159	33	High school diploma or equivalent; Short-term	25,280
Physical therapy assistants	32	34	Associate's degree	58,790
Medical and health services managers	133	32	Bachelor's degree	100,980
Physician assistants	39	31	Master's degree	112,260
Information security analysts	41	31	Bachelor's degree	99,730

Sources: Based on Bureau of Labor Statistics, U.S. Department of Labor, "Employment Projections: 2019-2029" (September 20, 2020), from www.bls.gov/emp.

low-skill jobs is low; about half of the jobs being filled require moderate skills—equivalent to education beyond high school but not a college degree. Many are expected to read directions and write e-mail, for example.

This shortage of qualified workers means that employers are faced with the undesirable option of leaving jobs unfilled, which can limit their production and growth. This also means the market for knowledge workers who have in-demand skills is much more competitive. **Knowledge workers** are employees who contribute to the company not through manual labor, but through what they know, perhaps about customers or a specialized body of knowledge. Rather than leaving jobs unfilled or trying to aggressively compete for knowledge workers, a more plausible option that many companies are choosing is to hire employees who lack the complete skill set needed for the job, relying on training to develop the skills. For example, CareHere will pay for certifications or training to close a skill gap for an in-demand job.[87] The company recently took over a facility and wanted to continue to employ some of the licensed practical nurses, though it needed them to become registered nurses. So CareHere paid for their training, which cost almost $14,000 per person for tuition, books, and certification fees. The firm adjusted the nurses' schedules so they could complete their classwork.

To prepare employees with the skills they need and foster the development of knowledge workers, companies are getting involved in training partnerships with local, federal- and state-sponsored funded organizations. The Hershey Company has experienced difficulty trying to fill maintenance and manufacturing roles at its plant in Virginia.[88] So it decided to partner with the Shenandoah Valley Workforce Development Board, which works with local high schools to encourage young people to seek careers in manufacturing and develop a future workforce. The facility offers a two-week, paid boot camp to attract high school seniors, individuals from the Wilson Workforce Rehabilitation Center, and other people in the local community who have no manufacturing experience and want to see what working in a manufacturing environment is like. Thirty-six people applied for the boot camp and 15 were accepted. Graduates of the program are considered for full-time jobs. Tesla has two partnerships with community colleges to train individuals to assemble and service electric vehicles.[89] Google has partnerships with 25 community colleges across the United States as well as other companies including Walmart, Hulu, and Sprint to develop an information technology support professional certificate that students can earn in 8 months.

Some companies are relying on training of hard-to-employ individuals to provide the skills they need to fill open positions. Cisco hired NPower, a nonprofit organization, to recruit and train their potential hires.[90] The nonprofit recruits young adults, women, and veterans from jobs in high-poverty, high-crime areas, and trains them in 6 months to fill tech vacancy roles. More than 80 percent of graduates are employed full time or enrolled in higher education within one year of completing the 6-month tech training program.

Developing Leadership

Companies report that the most important talent management challenges they face are identifying employees with managerial talent and training and developing them for managerial positions.[91] This is attributed to the aging of the workforce, globalization, and the need for managers to contribute to employee engagement. Executive, administrative, and managerial occupations will experience the greatest turnover due to death or retirement.[92] Also, many companies do not have employees with the necessary competencies to manage in a global economy.[93] To successfully manage in a global economy, managers need to be self-aware and be able to build international teams, create global management and marketing practices, and interact and manage employees from different cultural backgrounds. Managers contribute to employee engagement by performing basic management functions (planning, organizing, controlling, and leading) but also through using good communication skills, helping employees develop, and working collaboratively with employees.

PepsiCo's Leadership Assessment & Development (LeAD) program is customized for early career employees, midcareer employees, and senior executives.[94] All three programs include tools to identify, assess, and give participants feedback on their level of competencies in growth, relationships, execution, agility, and thinking. The results are used to provide individual development plans for each participant. This information is used to identify less experienced employees with the best potential, place midcareer employees in appropriate development roles, and ensure talented senior executives are considered in the succession planning process. All LeAD participants indicated they were highly engaged, had a better understanding of their careers, and felt supported by the company.

Customer Service and Quality Emphasis

A company's customers judge its quality and performance. As a result, customer excellence requires attention to product and service features, as well as to interactions with customers. Customer-driven excellence includes understanding what the customer wants, anticipating future needs, reducing defects and errors, meeting specifications, and reducing complaints. How the company recovers from defects and errors is also important for retaining and attracting customers.

Due to the increased availability of information and competition, consumers are very knowledgeable and expect excellent service. This presents a challenge for employees who interact with customers. The way in which clerks, sales staff, front-desk personnel, and service providers interact with customers influences a company's reputation and financial performance. Employees need product knowledge and service skills, and they need to be clear about the types of decisions they can make when dealing with customers. Customer service as a strategic training and development initiative is discussed in **Chapter Two**.

To compete in today's economy, whether on a local or global level, companies need to provide a quality product or service. If companies do not adhere to quality standards, their ability to sell their product or service to vendors, suppliers, or customers will be restricted. Some countries even have quality standards that companies must meet to conduct business there. **Total Quality Management (TQM)** is a companywide effort to continuously improve the ways in which people, machines, and systems accomplish work.[95] Core values of TQM include the following:[96]

- Methods and processes are designed to meet the needs of internal and external customers.
- Every employee in the company receives training in quality.
- Quality is built into a product or service so that errors are prevented from occurring rather than being detected and corrected.
- The company promotes cooperation with vendors, suppliers, and customers to improve quality and hold down costs.
- Managers measure progress with feedback based on data.

There is no universal definition of quality. The major differences in its various definitions relate to whether the customer, product, or manufacturing process is emphasized. For example, consider the different emphasis of quality experts W. Edwards Deming and Phillip Crosby. Deming emphasizes how well a product or service meets customer needs. Crosby's approach emphasizes how well the service or manufacturing process meets engineering standards.

The emphasis on quality is seen in the establishment of the **Malcolm Baldrige National Quality Award** and the **ISO 9000:2000** quality standards. The Baldrige award, created by public law, is the highest level of national recognition for quality that a U.S. company can receive. The award is given annually. To become eligible for the Baldrige, a company must complete a detailed application that consists of basic information about the firm and an in-depth presentation of how it addresses specific criteria related to quality improvement. The categories and point values for the Baldrige Award are found in **Table 1.5**. The award is not given for specific products or services. Organizations can compete for the Baldrige Award in one of several categories, including manufacturing, service, small business, education, health care, and nonprofit. The Baldrige Award is given annually in each of the categories, with a total limit each year of 18 awards. All applicants for the Baldrige Award undergo a rigorous examination process that takes from 300 to 1,000 hours. Applications are reviewed by an independent board of about 400 examiners who come primarily from the private sector. Each applicant receives a report citing company strengths and opportunities for improvement.

The Baldrige Award winners usually excel at human resource practices, including training and development. For example, consider The Center for Organ Recovery & Education (CORE).[97] CORE's mission "to save and heal lives through donation" drives the culture, as the staff works to encourage and maximize every possible life-saving donation across three states. CORE is an industry leader for having its laboratory do infectious disease testing and biopsies in-house, allowing pathologists to review samples remotely by computer. This has shortened recovery-to-transplant time on life-saving organs. CORE's processes for donor evaluation and organ/tissue recovery have significantly reduced costs for processing kidney, liver, heart, single lung, double lungs, and heart/lung organ compared to other hospitals and peer organ recovery organizations. CORE's customer surveys of donor families, transplant centers, corneal transplant surgeons, and tissue processors

TABLE 1.5 Categories and Point Values for the Malcolm Baldrige National Quality Award Examination

Leadership	**120**
The way senior executives create and sustain vision, values, and mission; promote legal and ethical behavior; create a sustainable company; and communicate with and engage the workforce	
Measurement, Analysis, and Knowledge Management	**90**
The way the company selects, gathers, analyzes, manages, and improves its data, information, and knowledge assets	
Strategic Planning	**85**
The way the company sets strategic direction, how it determines action plans, how it changes strategy and action plans if required, and how it measures progress	
Workforce Focus	**85**
Company's efforts to develop and utilize the workforce to achieve high performance; how the company engages, manages, and develops the potential of the workforce in alignment with company goals	
Operations Focus	**85**
Design, management, and improvement of work systems and work processes to deliver customer value and achieve company success and sustainability	
Results	**450**
Company's performance and improvement in key business areas (product, service, and supply quality; productivity; and operational effectiveness and related financial indicators)	
Customer Focus	**85**
Company's knowledge of the customer, customer service systems, current and potential customer concerns, customer satisfaction and engagement	
Total Points	**1,000**

Source: Based on National Institute of Standards and Technology (NIST), "2021–2022 Baldrige Excellence Framework" from the website for the National Institute of Standards and Technology (December 2020), https://www.nist.gov/news-events/news/2020/12/2021-2022-baldrige-excellence-framework-businessnonprofit-now-available.

show satisfaction levels above 90 percent. CORE's satisfaction survey results are in the top 25 percent of comparison health care organizations. Employees believe they are connected to the organizations mission, receive competitive benefits and salary, and have positive peer relationships. CORE's commitment to training and development has contributed to its positive results for donors, recipients, and its employees. All employees must participate in at least 10 hours of professional development per year. This goal has been met and exceeded for the past four years. On average, CORE employees complete 12 to 13 hours of professional development annually. In five years, CORE doubled its investment in professional development costs for its workforce, from less than $60,000 in 2014 to more than $120,000 in 2019. This investment includes supporting employees to attend conferences to obtain education and network with other professionals. Additionally, the human resources department uses a forecasting model to maintain optimal workforce skills and capacity.

The International Organization for Standardization (ISO), a network of national standards institutes that includes 160 countries and has a central governing body in Geneva, Switzerland, is the world's largest developer and publisher of international standards.[98] The ISO develops standards related to management as well as a wide variety of other areas, including education, music, ships, and even protecting children. ISO standards are voluntary, though countries may decide to adopt ISO standards in their regulations, in which case they may become a requirement to compete in the market. The ISO 9000 is a family of standards related to quality (ISO 9000, ISO 9001, ISO 9004, and ISO 19011). The ISO 9000 quality standards address what the company does to meet regulatory requirements and the customer's quality requirements while striving to improve customer satisfaction and continuous improvement. The standards represent an international consensus on quality management practices. The quality management standards of the ISO 9000 are based on eight quality management principles, including customer focus, leadership, employee engagement, a process approach, a systems approach to management, continuous improvement, evidence-based decision making, and the establishment of mutually beneficial relationships with suppliers. ISO 9001:2015 is the most comprehensive standard because it provides a set of requirements for a quality management system for all organizations, both private and public. The ISO 9000:2015 has been implemented by more than 1 million organizations in 176 countries, meaning that companies have to follow the standards to conduct business in those countries. ISO 9004 provides a guide for companies that want to improve.

Why are standards useful? Customers may want to check that the product they ordered from a supplier meets the purpose for which it is required. One of the most efficient ways to do this is when the specifications of the product have been defined in an international standard. That way, both supplier and customer are on the same wavelength, even if they are based in different countries, because they are both using the same references. Today, many products require testing for conformance with specifications, compliance with safety, or other regulations before they can be put on many markets. Even simpler products may require supporting technical documentation that includes test data. With so much trade taking place across borders, it is more practical for these activities to be carried out not by suppliers and customers, but by specialized third parties. In addition, national legislation may require such testing to be carried out by independent bodies, particularly when the products concerned have health or environmental implications. One example of an ISO standard is the International Standard Book Number (ISBN) on the back cover of every book. Publishers and booksellers are very familiar with ISBN numbers, since these numbers are the method through which books are ordered and bought. Try buying a book on the Internet, and you will soon learn the value of the ISBN number—there is a unique number for the book you want.

In addition to competing for quality awards and seeking ISO certification, many companies are using the Six Sigma process. The **Six Sigma process** refers to a process of measuring, analyzing, improving, and then controlling processes once they have been brought within the narrow Six Sigma quality tolerances or standards. The objective of Six Sigma is to create a total business focus on serving the customer; that is, to deliver what customers really want when they want it. Training is an important part of the process. Employees trained in Six Sigma receive different color belts such as Black Belts. The color of the belt signifies their level of expertise. Walmart uses Black Belt training in its fresh food departments.[99] The program is designed to eliminate product waste, reward excellence, retain talent, and develop a future leaders in the fresh food department. New employees attend a mandatory white belt certification. After completing the program, employees can attend training to gain orange, blue, and black belt (the highest level). Each belt requires coursework and gives employees more accountability and expertise. Each belt achieved results in more pay for employees. So far, 97 percent of new employees have completed white belt training, and over 40 percent have finished the first part of orange belt training. Meat department employees saved an estimated $93,000 per year by producing less waste from faulty cuts.

Training can help companies meet the quality challenge by teaching employees a concept known as "lean thinking." **Lean thinking** is a way to do more with less effort, equipment, space, and time, but still provide customers with what they need and want. Part of lean thinking includes training workers in new skills or teaching them how to apply old skills in new ways so they can quickly take over new responsibilities or use new skills to help fill customer orders. Baylor Health Care System wanted to decrease waste and improve patient satisfaction and outcomes through implementing lean thinking and process improvements in several of its hospitals.[100] This included training employees in how to make changes to work processes. Lean thinking and process improvement supported by training provided significant value. For example, The Corporate Supply Management team eliminated two-thirds of the time required for completing contracts, developed a decision tree for different types of projects, and reduced errors, saving $10 million. A hospital readmission team redesigned the patient discharge process to reduce the chances of patients returning within 30 days. They realized a 44 percent decrease in readmissions over a 6-month period, which improved the quality of life for patients and Baylor's ability to receive Medicare/Medicaid payments from the government.

ISO 10015:2019 are quality management guidelines detailing how to establish, implement, maintain, and insure training and development systems help employees' obtain the knowledge and skills they need to perform effectively.[101] The guidelines emphasize the Plan, Do, Check, Act cyclical model of continuous improvement. The Plan, Do, Check, Act model includes the steps included in instructional system design discussed earlier in this chapter. Plan involves identifying knowledge and skill gaps. Do focuses on designing training and development activities to narrow the gaps. Check emphasizes monitoring and evaluating the activities to insure they are effective in narrowing the knowledge or skill gap. Act includes identifying other areas of training and development needs and improving current activities.

New Technology

Technology shapes the way we play, communicate, purchase products and services, plan our lives, and work. Consider that in the United States, one estimate is that 94 percent of adults reported having Internet access in 2019.[102] Globally that number drops to 56 percent of adults. There are twice as many households with a computer per 100 people in developed countries, compared to those in developing nations. Survey results show that during the pandemic, we used technology to engage in activities and connect in ways we previously did face-to-face. For example, we attended virtual parties or social gatherings (32 percent), ordered food online (32 percent), watched a play or concert (20 percent), and participated in an online fitness class (18 percent).[103]

Influence on Training

The most important implication of technology for training is that it has facilitated the development of digital learning.[104] **Digital learning** refers to learning that can occur daily in the work setting using devices such as smartphones, tablets, and computers. It can help employees solve problems and communicate and collaborate with peers. Digital learning can be enabled by the company when it provides access to specific learning activities such as courses, videos, or discussion boards. But digital learning can also occur spontaneously when employees search the Internet, search for videos on YouTube, or interact with others on social media. Digital learning can involve employees accessing content that was prepared by a company's training team. However, digital learning gives employees the opportunity to control learning. Employees are self-directed learners. That is, employees can create and share content, gain knowledge, and use search engines to identify sites that can help them acquire knowledge and skills or solve problems. Employees can learn whenever and wherever on their own time and pace.

Companies are embracing digital learning because it allows them to create a workplace where employees can engage in continuous learning focused on upskilling and reskilling. **Upskilling** refers to employees improving or expanding their current skills. **Reskilling** refers to employees acquiring new knowledge or skills. Upskilling and reskilling are important for employees growth and employability. Upskill and reskilling are also necessary for companies to stay competitive through adapting to change and more quickly offering new products and services. For digital learning to be effective, learning resources should be available to employees on-demand; learning content should be as short as possible and offered in multiple formats such as games, podcasts, or videos; and employees need to be able to easily search learning resources and quickly find what they need.

Guardian Life Insurance Company of America and Royal Caribbean have adopted digital learning.[105] Guardian Life developed an immersive virtual reality tool that allows new field representatives to learn more about the agency culture, systems, processes, and people. Royal Caribbean's EMBARK training increases job skills proficiency for multiple job roles onboard Royal Caribbean ships by offering short, interactive digital learning modules. Hundreds of modules have been created for different departments, including Food and Beverage, Housekeeping, Lifeguard, and Guest Services. The digital learning platform provides a mobile-responsive user interface, videos, interactive content, and quizzes. Crew members can access it from any device on land or while at sea. Also, many adults are engaging in digital learning by acquiring new skills on their own from online sites such as Udemy, Skillshare, and Coursera, a trend which increased during the pandemic.[106] Both professional and personal courses that are popular include topics such as well-being, Pilates, programming, and technical drawing.

Digital learning solutions can include the use of artificial intelligence and wearables.[107] Artificial intelligence is a technology that simulates human thinking. It works through queries that allow it to learn from data over time so that it can identify trends and patterns that influence future searches and suggestions. Artificial intelligence is in use at home and in the workplace.[108] At home, artificial intelligence has provided us with personal assistants such as Apple's Siri or Amazon's Alexa to whom we can give orders such as to make a purchase or play a favorite song. Assistants, known as chatbots, are also available at work. MetLife Inc., an insurance company, provides chatbots equipped with artificial intelligence to its call center employees.[109] The chatbot listens in on service calls and alerts the employee when they are not correctly interacting with a customer. For example, it can prompt a call agent to use with more energy when speaking and make their supervisor aware of the issue. Call center employees can immediately make changes, the supervisor has information they can use to coach employees to improve their performance, and the data collected by the chatbot can be used to identify potential training needs or skills to emphasize during training.

Robots with artificial intelligence are being used in service and manufacturing.[110] FedEx is using robots that can both "see" using cameras and computer vision and "think" using artificial intelligence. They can work eight hours a day sorting over one thousand packages an hour from bins onto a conveyor belt. They are working at warehouses and sorting centers performing physically demanding and boring work–jobs that FedEx has difficulty finding and retaining humans to do. They can call on human workers when they need help such as identifying and sorting soft packages used to ship clothing. The robots are continuously learning, but compared to a human worker, they will never be able to deal with all of the unexpected situations that occur. Mabu, a portable robot, lives with a retired elderly man who lives alone. The robot monitors his irregular heartbeat, checks to make sure he weighs himself, takes his medications, and exercises regularly. The robot relays the information back to his health care providers.

Wearables are increasingly being used for training and performance support solutions. Wearable Intelligence provides smart eyewear technology and camera technology to give employees hands-free, voice-activated access to procedures and checklists and live access to experts using tablet computers. These technologies allow data and live video sharing, the opportunity to review best-practice videos before or during the performance of complex procedures and operations, and real-time notifications and alerts.[111] Aircraft mechanics at Robot Skies, a drone maintenance company, wear Google Glass headsets that allow them to share what they are seeing with remote experts who can provide advice and instruction on how to complete a repair.[112]

We discuss various digital learning solutions, artificial intelligence, and wearables in more detail in **Chapter Eight**.

Flexibility in Where and When Work Is Performed

The globalization of the world economy and the development of e-commerce have made the notion of a 40-hour workweek obsolete. Survey results show that 46 percent of employees work more than 45 hours per week.[113] As a result, companies need to be staffed 24 hours a day, seven days a week. Employees in manufacturing environments and service call centers are being asked to move from 8- to 12-hour days or to work afternoon or midnight shifts. Similarly, professional employees face long hours and work demands that spill over into their personal lives. Notebook computers, smartphones, and smartwatches bombard employees with information and work demands. In the car, on vacation, on planes, and even in the bathroom, employees can be interrupted by work demands. More demanding work results in greater employee stress, less satisfied employees, loss of productivity, and higher turnover—all of which are costly for companies.

Prior to the pandemic, it is estimated that 29 percent of wage and salary workers were able to work from home in their primary job and 25 percent at least occasionally work at home.[114] Slightly over half of workers had a flexible schedule that allowed them to vary the times they began and stopped work. About one-quarter of workers had a flexible schedule and could also work at home, while one-third had a flexible schedule but could not work at home. Thirty-eight percent of workers could not work at home and did not have a flexible schedule. Employees in managerial, business, and financial operations and professional occupations are most likely to do some or all of their work at home. Both the company and employees can benefit by providing flexible work schedules, allowing work-at-home arrangements, protecting employees' free time, and more productively using employees' work time.[115] The benefits of such flexibility include the ability to attract and retain talented employees; reduced stress, resulting in healthier employees; and a rested workforce that can maximize the use of its skills.

It appears that many workers would prefer to continue working remotely after the pandemic is over. At the one-year anniversary of the pandemic, a majority of U.S. workers reported they are working remotely all or part of the time in order to avoid catching or spreading the coronavirus.[116] Twenty-three percent reported they want to continue working remotely out of concern about the coronavirus. Forty-four percent of workers want to continue working remotely because they prefer it. They believe they are either just as or more productive working at home than at the office. For example, at Discover, Financial Services found that one-third of employees wanted to work permanently from home.[117] Other employees wanted the flexibility of choosing to work remotely, which Discover plans to provide post-pandemic.

Companies' policies on remote work will likely continue to vary. Some companies such as Phillips 66, the oil refiner, recalled employees without preexisting health conditions back to work from the office during the pandemic.[118] They did so because company leaders believed that limiting employee interactions to teleconferences and video meetings made it too difficult to generate the same level of creativity and productivity that occurs during face-to-face meetings in the office. Other companies are considering a hybrid approach involving working remotely as well as at the office. For example, CompuCom Systems Inc., an information technology service provider, is considering adopting core hours when employees would meet to exchange ideas, collaborate, and problem-solve.[119] Coursera, an online education provider, expects half of its employees to work blended hours after the pandemic. That is, three days a week in the office and the remainder of the week working remotely. At Automattic, almost all work is done remotely.[120] Automattic, which provides a content management system that is used on websites, has over 1,100 employees working in more than 50 countries. Employees rely on several tools including Slack, Zoom, and its own internal discussion board for documenting work, having discussions, and videoconferencing. The use of these tools means that everyone can access and search internal communications, creating feelings of transparency and inclusion. To ensure that employees have the ability to work remotely, Automattic uses a paid trial period consisting of using the company's systems and tools. The trial period allows job candidates to determine if they want to work remotely and whether the company thinks they will be successful. The company believes that job candidates who can successfully work remotely are self-starters and continuous learners who do not need a lot of instruction and close supervision to complete work tasks.

Regardless of where they work, many employees experience emotional exhaustion, anxiety, and depression due to work demands, and these symptoms have been made worse by the pandemic. One estimate is that depression and anxiety disorders cost the global economy $1 trillion dollars each year in lost productivity.[121] Companies are taking several steps to help employees improve their mental health.[122] One way is by requiring employees to take time off. For example, employees at Indeed.com receive an extra holiday every month, usually on a Friday to create a long weekend. In **Chapter Ten**, other ways companies are trying to improve employees' mental health through work-life balance policies are discussed.

Increased Use of Nontraditional Employment

More companies are moving away from the traditional employment model based on full-time workers to increasingly rely on nontraditional employment. **Nontraditional employment** includes the use of independent contractors, freelancers, on-call workers, temporary workers, and contract company workers. One estimate is that almost 4 percent of workers in the United States (almost 6 million people) held contingent jobs, that is, jobs that were temporary or they did not expect to last.[123] Studies estimate that between 20 and 35 percent of the total U.S. workforce is engaged in nontraditional employment, including those who have a full-time job (what is called "moonlighting").[124] Companies that rely primarily on nontraditional employment to meet service and product demands are competing in the **gig economy**.[125] Gig workers are typically independent contractors who control when and where they work and often are assigned work through a website or mobile app (e.g., a ride-sharing driver). Because these workers do not work for a company, they do not have taxes withheld from their earnings, they do not have to receive minimum wage or overtime pay, and they are not eligible for workers' compensation and unemployment insurance.

The model for the gig economy focuses more on using a contingent workforce and more project-based assignments and has now been adopted in part by more and more U.S. businesses. This approach to project-based employment will require a different set of management skills for line managers who might need to manage virtual teams, remote workers, and constantly changing work terms. Survey results suggest that the share of gig workers at U.S. businesses has increased by more than 15 percent over the last 10 years and is expected to continue.[126] Examples of companies that rely on the gig economy include transportation services such as Uber and Lyft and food delivery services such as Caviar.

Nontraditional employment has benefits and disadvantages for both individuals and employers.[127]

More and more individuals don't want to be attached to any one company. They want the flexibility to work when and where they choose. They may want to work fewer hours to better balance work and family responsibilities. Also, individuals who have been downsized may choose nontraditional employment while they are seeking full-time employment.

From the company's perspective, it is easier to add temporary employees when they are needed and easier to terminate their employment when they are not needed. Part-time workers can be a valuable source of skills that current employees may not have and that may be needed for a specific project that has a set completion date. Part-time workers can be less expensive than permanent employees because they do not receive employer health benefits or participate in pension plans. Employing part-time workers such as interns allows the company to determine if the worker meets performance requirements and fits in with the company culture. If so, the company may then decide to offer the employee a permanent position. For example, some technology companies such as Honeywell have relied on crowdsourcing, using services such as Topcoder and Amazon's Mechanical Turk, to find scientists and software engineers who have the skills lacking in their own employees to solve problems, create apps, or write code.[128] Google has approximately 121,000 temporary employees and contractors around the world, compared with 102,000 full-time employees. The temporary and contract workers perform a variety of jobs including content moderation and developing software.

Nontraditional employment also has potential disadvantages. These include concerns about work quality, inability to maintain the company culture or team environment, and legal liability.[129] The use of nontraditional work employment and work-at-home arrangements have resulted in the development of co-working sites or shared offices. Co-working sites are used by diverse workers such as designers, artists, freelancers, consultants, and other independent contractors. They pay a daily or monthly fee for a guaranteed work space including desks, Internet, conference rooms, and some even provide couches for relaxing and free coffee and beer.[130]

A key issue that nontraditional employment presents is the need to provide training that is specific, on demand, delivered in small chunks, and specifically focused on the worker's job.[131] Training contract workers, for example, helps ensure that they can successfully perform their jobs the way the company wants them to as well as establish the company as a place that they might want to come back to work for in the future. Some of the challenges in training workers in nontraditional employment relationships include ensuring that the type and length of their training is sufficient but not so extensive as to make them qualify as full-time employees for salary and benefit purposes.

High-Performance Work Systems

New technology causes changes in skill requirements and work roles and often results in redesigned work structures (e.g., work teams).[132] For example, computer-integrated manufacturing uses robots and computers to automate the manufacturing process. The computer allows the manufacture of different products simply by reprogramming the computer. As a result, laborer, material handler, operator/assembler, and maintenance jobs may be merged into one position. Computer-integrated manufacturing requires employees to monitor equipment and troubleshoot problems with sophisticated equipment, share information with other employees, and understand the relationships among all components of the manufacturing process.[133]

Through technology, the information needed to improve customer service and product quality becomes more accessible to employees. This means that employees are expected to take more responsibility for satisfying the customer and determining how they perform their jobs. One of the most popular methods for increasing employee responsibility and control is work teams. **Work teams** involve employees with various skills who interact to assemble a product or provide a service. Work teams may assume many of the activities usually reserved for managers, including selecting new team members, scheduling work, and coordinating activities with customers and other units in the company. To give teams maximum flexibility, cross training of team members occurs. **Cross training** refers to training employees in a wide range of skills so they can fill any of the roles needed to be performed on the team.

Consider the high-performance work systems at Johnson Controls.[134] Johnson Controls sells products and related technology and services to provide heating and cooling, humidity control, ventilation, and security in all kinds of buildings. To help customers meet their needs for energy consumption and cost control, the company's 105,000 employees must be constantly innovating and improving quality. Team work in manufacturing is the key to Johnson Control's success.

At the company's Norman, Oklahoma, facility, 700 employees produce equipment for heating, ventilation, and air condition (HVAC). They are assigned to 20-member high-performance teams. The company provides information technology including a manufacturing execution system, which provides teams with up-to-the-minute data about inputs needed from inventory and progress against the schedule for equipment in production. Operators use scanners to track the movement of components and get information about what items will be made next. The teams meet once a week to evaluate and solve problems they have identified. For example, when a team noticed that coils in its products were being damaged, the team investigated the production process and traced the problem to removing and replacing a screw on a panel. The team identified a simple solution: they asked workers at an earlier manufacturing station to leave the screw loose, which ended up saving the company thousands of dollars. The high-performance teams also address safety issues. The company credits the continuous improvement process in the Norman plant for a 25 percent increase in productivity, cost savings of $5 million, zero accidents, and a decline in product defects.

Use of new technology and work designs such as work teams needs to be supported by specific human resource management practices such as allowing employees to select new team members.[135] What role does training play? Employees need job-specific knowledge and basic skills to work with the equipment created by the new technology. Because technology is often used as a means to achieve product diversification and customization, employees must have the ability to listen and communicate with customers. Interpersonal skills, such as negotiation and conflict management, and problem-solving skills are more important than physical strength, coordination, and fine motor skills—previous job requirements for many manufacturing and service jobs.

Technology has also allowed companies (and forced companies during the pandemic!) to perform work using virtual teams. **Virtual teams** are teams in which members are separated by time, geographic distance, culture, and/or organizational boundaries and rely almost exclusively on technology (such as e-mail, Internet, and video conferencing) to interact and complete their projects. Virtual teams can be formed within one company, whose facilities are scattered throughout the country or the world. A company may also use virtual teams in partnerships with suppliers or competitors to pull together the necessary talent to complete a project or speed the delivery of a product to the marketplace. The success of virtual teams requires a clear mission, good communications skills, trust between members that they will meet deadlines and complete assignments, and an understanding of cultural differences (if the teams have global members).

For example, Art & Logic software developers all work remotely from across the United States and Canada using home offices, rented office spaces, or co-working facilities.[136] The company's clients represent a diverse set of industries, including education, aerospace, music technology, consumer electronics, entertainment, and financial services. The project teams work on the most unusual and difficult problems that developers at other companies have failed to solve. Art & Logic tries to accommodate the unique schedule and work-style requirements of its developers, but its work is highly collaborative within project teams. Every project consists of at least a project manager/developer and has a maximum of five to seven developers. Teams use Google Apps for Business for sharing documents and communicating (both within the team and with clients).

Snapshot of Training Practices

Training can play a key role in helping companies gain a competitive advantage and successfully deal with competitive challenges. Before you can learn how training can be used to help companies meet their business objectives, and before you can understand training design, training methods, and other topics covered in the text, you need to become familiar with the amount and type of training that occurs in the United States. Also, you must understand what trainers do. The next sections of this chapter present data regarding training practices (e.g., how much companies spend on training, what type of training is occurring, and who is being trained), as well as the skills and competencies needed to be a trainer.

Training Facts and Figures

The snapshot of training practices provided in this section is based on data collected from a number of sources, including surveys conducted by *training* magazine and the ATD (the Association for Talent Development, previously known as the American Society for Training and Development).[137] For several reasons, these data should be viewed as reasonable estimates of practices rather than precise facts. One reason for this is that the samples may not be representative of all sizes or types of companies. For example, the *training* survey was conducted by a research firm that e-mailed invitations to subscribers to participate in an online survey. The response rate ranged from 34 percent for mid-sized firms (1,000 to 9,999 employees) to 40 percent for small firms (100 to 999 employees). The ATD annual *State of the Industry Report* includes hundreds of organizations across all major industries grouped into two categories: companies that have received awards for training (e.g., ATD BEST Award winners) and consolidated responses (including data submitted from all organizations submitted for a specific year).

You may be asking yourself questions such as "How much time and money do companies spend on training?" or "Is instructor-delivered training obsolete?" **Table 1.6** provides a snapshot of trends in workplace learning.

As can be seen in **Table 1.6**, U.S. organizations continue to invest large amounts of money in learning initiatives. Here is an overview of some key trends in these investments:

- After rising from 83 billion in 2019, total training expenditures slightly declined to $82.5 billion in 2020.
- Average training expenditures per employee have gradually risen over the last several years.
- The average number of learning hours per employee in 2020 increased over the previous three years.
- There is an increased demand for specialized learning that includes manager, professional, and industry-specific content.
- The use of technology-based learning delivery has increased from 43 percent in 2017 to 56 percent in 2020.
- Self-paced online learning is the most frequently used type of technology-based learning.
- Traditional, instructor-led classroom training continues to be the most popular method. However, its use continues to decline (54 percent in 2017 versus 40 percent in 2020).

Of the $82.5 billion spent on training, 65 percent is for internal costs such as training-staff salaries and course development, 25 percent is for services by learning suppliers (such as consultants, workshops, or training programs outside the company), and 10 percent goes toward tuition reimbursement. Cost per learning hour has remained the same since 2017. This suggests that in the last four years, companies have become more effective in distributing training to employees.

Figure 1.4 shows the different types of training provided by companies. Managerial and supervisory, processes, procedures, and business practices, and mandatory and compliance training account for 37 percent of learning content. The least amount of learning content concerns basic and other skills. The use of online training varies by content area.[138] Mandatory and compliance training, interpersonal skills training, and information technology systems training is delivered online. Online training is used least for executive development and sales training.

The Impact of the Pandemic on Training Practices

The survey used for the 2020 Training Industry Report included several questions about the influence of the COVID-19 pandemic on training practices.[139] The results show that not all companies stopped training. Sixteen percent of companies put 75 percent or more of their training on hold while 20 percent temporarily stopped slightly more than 25 to 50 percent of their training. Fourteen percent of companies did not

TABLE 1.6 Questions and Answers about Training Practices

Investment and Distribution of Expenditures	
Q:	How much do U.S. organizations spend on employee learning and development?
A:	Approximately $87.5 billion
Q:	How much is spent per employee?
A:	$1,309
Q:	What is the percentage of dollars spent on training and development as a percentage of payroll?
A:	3.2 percent
Q:	How much is spent as a percentage of revenue?
A:	1.3 percent
Q:	How much time do employees spend in formal training each year?
A:	34.7 hours
Q:	Who receives most of the training?
A:	44 percent of training budgets and dollars are spent on nonexempt employees, 23 percent on exempt employees, 24 percent on managers, and 9 percent on executives
Q:	Which industry spends the most money on training? The least amount of money on training?
A:	Finance, insurance, and real estate at $1,413 per employee is the highest and manufacturing at $487 per employee is the lowest
Efficiency	
Q:	What percent of total expenses goes to tuition reimbursement?
A:	10 percent
Q:	How many employees are there for every training staff member?
A:	330 employees for every staff member
Q:	What is the average cost for providing one learning hour to one employee?
A:	$77
Q:	What is the average cost of producing one hour of formal training?
A:	$1,955
Delivery Methods	
Q:	How is training delivered?
A:	40 percent by an instructor in a classroom, 33 percent via blended learning (including both face-to-face and technology delivery), 29 percent online, 10 percent mobile devices, and 4 percent using social learning
Q:	What percentage of direct learning expenditures is allocated to outside providers (i.e., outsourced)?
A:	11 percent

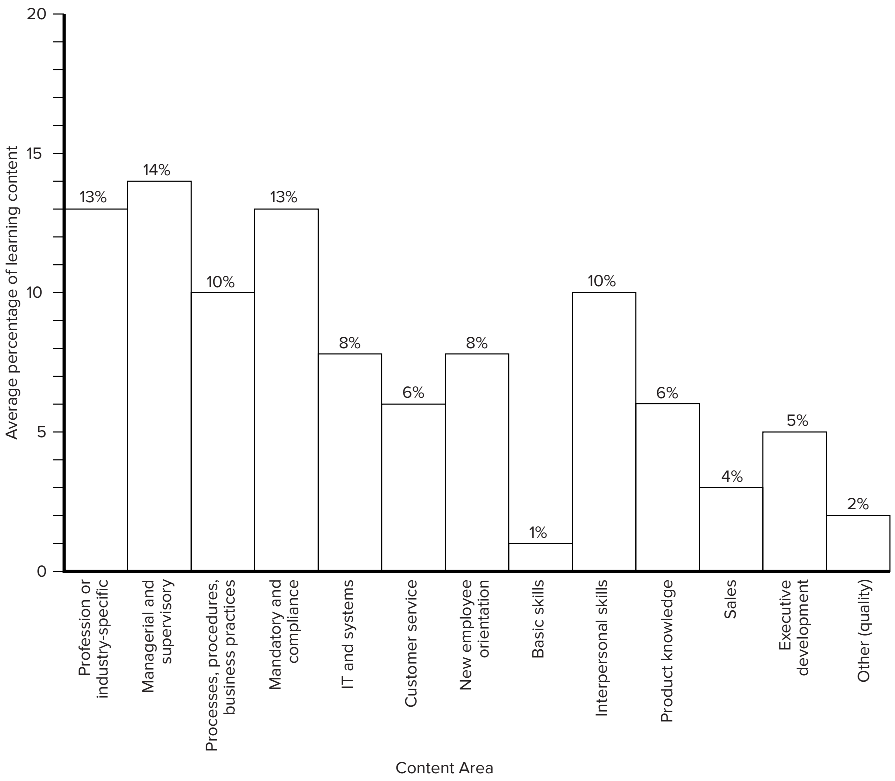
Sources: M. Ho, *2020 State of the Industry*. Alexandria, VA: Association for Talent Development, December 2020. "2020 Training Industry Report," *training* (November–December 2020), pp. 22–37.

temporarily stop any training. The biggest challenges that companies reported during the pandemic included having the technology to deliver remote training, lacking resources, converting training content to a digital format, and getting employees engaged in remote learning. The results also provide some preliminary insight into how training might change when the pandemic is over. Fifty-four percent of companies plan to return to some face-to-face classroom instruction but will still maintain the remote learning developed due to the pandemic. Only 11 percent plan to create new classroom training but maintain the remote learning during the pandemic.

Training Investment Leaders

The chapter's opening vignette illustrates how training can be used by companies to gain a competitive advantage. Higher investment in training by companies in the United States is related to use of innovative training practices and high-performance work practices such as teams, employee stock ownership plans, incentive

FIGURE 1.4 Different Types of Training Provided by Companies



Note: Data from consolidated responses (companies that submitted their annual data as part of ATD's benchmarking programs).

Source: Based on M. Ho. *2020 State of the Industry*. Alexandria, VA: Association for Talent Development, December 2020.

compensation systems (profit sharing), individual development plans, and employee involvement in business decisions. This spending (along with the use of high-performance work practices) has been shown to be related to improved profitability, customer and employee satisfaction, and the ability to retain employees. For example, companies including Wipro Technologies, Valvoline Instant Oil Change, IBM, and Verizon have recognized that training contributes to their competitiveness. They make a substantial financial investment in training and use it to drive productivity, customer service, and other results important to business. **Chapter Two** discusses how training can help companies meet their business goals.

In terms of their training practices, how do companies that have recognized training's importance in gaining a competitive advantage differ from other companies? ATD's *State of the Industry Report, 2020*, compares the training practices of companies that were part of the ATD consolidated responses with companies that received ATD BEST Awards (recognizing companies that show a clear link between learning and performance).[140] Consolidated responses included companies who provided ATD with a standard set of information on their training practices (e.g., number of hours spent on training); these included 283 companies with an average of 15,091 employees. **Table 1.7** shows the characteristics of BEST Award–winning companies. As will be discussed in **Chapter Two**, the BEST Award winners are engaging in strategic training and development—training and development that supports the business's strategies and has measurable outcomes. The BEST Award winners included 66 companies with an average of 89,558 employees. **Table 1.8** compares the BEST Award winners with the benchmark companies that provided consolidated responses. As the table shows, companies that were BEST Award winners were able to more efficiently deliver training (less cost) than other firms. Also, at BEST Award-winning companies, employees on average engaged in more learning hours than employees at the other firms.

TABLE 1.7 Characteristics of BEST Award Winners

Alignment of business strategy with training and development
Learning is valued as part of the culture and supported by executive leaders and top managers
Effectiveness and efficiency of learning is measured
Investment in training and development
Different learning opportunities are provided and all employees have access to them
Measurement of effectiveness and efficiency of training and development activities
Nontraining solutions for performance improvement used, including organization development and process improvement

Source: Based on "About BEST Awards" TD, from www.td.org, accessed February 13, 2021.

TABLE 1.8 Comparison of BEST Award Winners and Benchmark Companies

	Consolidated Company	BEST Award Winner
Amount of training received per employee	35 hours	41 hours
Average cost per learning hour available	$1,955	$1,861
Amount spent on training per employee	$1,308	$986
Average learning hours available per training and development staff member	572 hours	403

Source: M. Ho, *2020 State of the Industry*. Alexandria, VA: Association for Talent Development, December 2020.

Roles, Capabilities, Positions, and Salaries of Training Professionals

Trainers can typically hold many jobs, such as instructional designer, technical trainer, or needs analyst. Each job has specific roles or functions. At Discover, the financial services company, learning and development professionals work in four practice areas: learning strategy (identify and set learning and development goals), curriculum development (design learning solutions), instruction (facilitate training), and technology and infrastructure (responsible for metrics, reporting, and managing the learning management system).[141] **Table 1.9** provides examples of the roles that training and development professionals might take in their jobs. These roles are included in jobs such as trainer, virtual instructor, learning technologist, instructional designer, content curator, learning consultant, and training manager.[142] Training department managers devote considerable time to the roles of business partner and learning strategist. Training department managers may be involved in the project management role, but, because of their other responsibilities, they may be involved to a lesser extent than are specialists who hold other jobs. Human resource managers may also be required to complete many of the training roles, although their primary responsibility is in overseeing the human resources functions of the division, department, or company (e.g., staffing, recruiting, compensation, and benefits). Special knowledge, skills, or behaviors—also called capabilities—are needed to perform each role successfully.

TABLE 1.9 Training and Development Roles

Learning Strategist	Determines how workplace learning can be best used to help meet the company's business strategy
Business Partner	Uses business and industry knowledge to create training that improves performance
Project Manager	Plans, obtains, and monitors the delivery of learning and performance solutions to support the business
Professional Specialist	Designs, develops, delivers, and evaluates learning and performance solutions

Source: Based on M. Allen and J. Naughton, "Social Learning: A Call to Action for Learning Professionals," *T+D* (August 2011), pp. 50–55.

Based on a study of training and development professionals, ATD developed a capability model.[143] Capability means the ability to integrate knowledge and skills and adapt to meet future needs. The capabilities and their corresponding knowledge and skills are shown in **Figure 1.5**. The Personal Capability identifies the foundational business and interpersonal knowledge and skills needed by training and development professionals. The Professional Capability includes important specialized knowledge and skills needed to be effective in the learning profession. The Organizational Capability includes the knowledge and skills needed to have an impact on business performance. Training and development professionals (and those aspiring to be!) need to acquire and use knowledge and skills across all three capabilities to be effective in their role.

FIGURE 1.5 The ATD Capability Model

ATD Capabilities and Knowledge for the Training & Development Profession		
Building Personal Capability	**Developing Professional Capability**	**Impacting Organizational Capability**
Communications	Learning sciences	Business insight
Emotional intelligence and decision making	Instructional design	Consulting and business partnering
Collaboration and leadership	Training delivery and facilitation	Organizational development & culture
Cultural awareness and inclusion	Technology application	Talent strategy & management
Project management	Knowledge management	Performance improvement
Compliance and ethical behavior	Technology literacy	Change management
Lifelong learning	Career and leadership development	
	Coaching	
	Evaluating impact	

Sources: Based on M. Hirt, "Competency Out, Capability In," *T+D* (February 2020), pp. 28–33; J. Cone, "A Very Different Model," *T+D* (February 2020), pp. 34–39.

To show you with an idea of the variety of responsibilities and expertise required for training professionals, **Table 1.10** provides an example of an instructional system designer job that was posted on the ATD website.

TABLE 1.10 Example of Job Posted on the ATD Website

Instructional Designer
Role Overview: This position provides a unique and challenging opportunity to work the entire project life cycle of learning solution projects including conducting needs assessments to identify strategically aligned learning and development initiatives, designing and developing training materials in a variety of delivery modes (e.g., instructor-led, in-person, or virtual training, self-paced training, eLearning, videos, infographics, supporting guides, etc.) as well as measuring business impact and effectiveness of deployed learning solutions. This position can be a remote, home-based position, or based out of our headquarters.
Responsibilities ■ Establishing key performance indicators to measure learning outcomes aligned with business impact, analyzing results, and communicating to key stakeholders ■ Conducting needs assessments across the organization and business lines to identify knowledge gaps and opportunities for knowledge transfer ■ Consulting with leaders to recommend effective process and solutions to address learning needs and establish learning goals using structured instructional design models ■ Collaborating with subject matter experts to conceptualize, storyboard, and design and implement effective learning components and materials to deliver a bespoke learning experience that creates measurable results and business impact for the target audience ■ Working with senior leadership to determine training priorities and resources available for training and creating a master schedule for learning and development initiatives ■ Modeling innovative learning paths, curriculums, and coursework while applying recognized instructional design principles and best practices that drive performance improvement ■ Designing and creating interactive, engaging, and high-impact content, exercises, and materials suited for our Learning Management System (LMS) and compliant with corporate standards ■ Engaging instructors to determine best delivery methods based on training objectives ■ Creating instructor guides to document coursework and understanding of lesson plans to facilitate the best learning experience delivery for participants ■ Identifying appropriate training development resources, whether internal, vendor or external program (where appropriate) while managing to budget
Desired Qualifications & Experience ■ BA or BS in Instructional Design, Educational Technology, or related field of adult learning principles is strongly preferred ■ Certification in Instructional Design strongly preferred ■ Minimum of three years experience proven success in designing and implementing learning & development programs (work samples required)
Knowledge, Skills & Abilities ■ Proficiency in instructional design methods (ADDIE, HPI), eLearning applications (e.g., Articulate, Captivate, etc.) and Adobe Creative Cloud ■ Experience working with and learning management systems with knowledge of accessibility standards ■ Exceptional verbal and written communication skills combined with strong graphic design skills and a passion for crafting high-level content ■ Demonstrated ability to meet challenging deadlines and manage multiple projects concurrently in a dynamic environment without sacrificing creativity, quality, and attention to detail ■ Experience developing measurement tools and strategies that focus on reaction to learning, knowledge transfer, application on the job, and business impact ■ Technically adept with the willingness to learn new technology, including content management systems, project management software, and other electronic platforms

Source: From ATD Job Bank, http://jobs.td.org/jobs, accessed February 13, 2021.

Table 1.11 shows the median salaries for the different types of typical positions that training and development practitioners have in organizations. An ATD survey provides some insight into where training and development professionals are employed and what they do.[144] Finance and health care industries employ the highest number of training and development professionals. Training and development professionals are also well-represented in manufacturing, insurance, government, and colleges, universities, and professional schools. The top areas of responsibility included instructional design (especially developing training content and designing training programs), delivering training, and managing learning programs. Regardless of their major area of responsibility, nearly all TD professionals need to be able to use presentation, spreadsheet, and learning management software, survey tools, virtual classroom technologies, and e-learning authoring tools.

TABLE 1.11 Average Salaries for Training Professionals

Executive-Level Training/Human Resource Development Manager	$132,947
Information Technology Training Manager	103,875
Training Department Manager (1–5 trainers report to you)	95,575
Training Department Manager (more than 5 trainers report to you)	111,116
One-Person Training Department	73,994
Classroom Instructor/Trainer	72,083
Instructional Designer	77,403
CBT/Web/Multimedia Programmer Designer/Manager	85,814
Management/Career/Organization Development Specialist	86,451
Human Resource Manager/Specialist	84,414

Source: Based on “Healthier Paychecks,” *training* (November/December 2020), pp. 38–43.

Who Provides Training?

In most companies, training and development activities are provided by trainers, managers, in-house consultants, and employee experts. However, as the snapshot of training practices suggests, training and development activities are also outsourced. **Outsourcing** means that training and development activities are provided by individuals outside the company. Training providers outside the company include colleges and universities, community and junior colleges, technical and vocational institutions, product suppliers, consultants and consulting firms, unions, trade and professional organizations, and government organizations. Outsourcing is discussed in greater detail in **Chapter Two**.

Who Is in Charge of Training?

Training and development can be the responsibility of professionals in human resources, human resource development, or organizational development.[145] Companies may also have entire functions or departments called human resources, human resource development, talent management or development, or organizational development that provide training and development.

In small companies, training is the responsibility of the founder and all the employees. When organizations grow to 100 employees, typically someone within the company is in charge of human resources, either as part of that person’s job or as his or her sole responsibility. At this point, training becomes one of the responsibilities of the employee in charge of human resources. In mid-sized to large organizations, training can be the responsibility of human resource professionals, or it can come from a separate function known as human resource development, talent management, development, learning, or organizational development.

Human resource development refers to the integrated use of training and development, organizational development, and career development to improve individual, group, and organizational effectiveness. Human resource development professionals might be involved in job and task analysis, instructional systems design, on-the-job training, and individual performance improvement. Organizational development professionals might focus on training as well as team building, conflict avoidance, employee development, and change management. Talent management professionals might focus on identifying the top talent in the company and ensuring that they get the training and development needed to promote them or prepare them for new positions. Learning professionals might focus on formal training and development activities as well as ensuring that informal learning and knowledge sharing occurs through the use of social networking tools. As you can see from these descriptions, training and development activities can be the responsibility of human resource management, human resource development, and organizational development professionals or departments. Keep in mind that regardless of what individual, department, or function is responsible, for training and development to succeed, employees, managers, training professionals, and top managers all have to take ownership for them. Throughout this book, the point is made that although training may be a formal responsibility of someone's job, employees at all levels of the company play a role in the success of training. Also, regardless of which function or department is responsible for training and development, it must be aligned with the business strategy and must support business needs. Professionals who are responsible for training and development may have specialized areas of expertise, such as change management for organizational development specialists, but they may also have training and development responsibilities. As shown in **Figure 1.5**, to perform workplace learning and performance roles successfully, professionals must understand the business and must master the capabilities. To do so requires developing expertise in the areas of knowledge underlying each capability.

As companies grow and/or recognize the important role of training for business success, they form an entire training or learning function (how training functions can be organized is discussed in **Chapter Two**). The training function may include instructional designers, instructors, technical training, and experts in instructional technology.

The reporting relationship between human resource management and the training function varies across companies.[146] Some organizations include training as part of the human resource function, believing that this provides strategic partnerships with other business functions and consistent companywide training. For example, at Life Care Centers of America, a Tennessee-based company that operates elder care facilities, training is included in the human resource department because the company believes that training is part of human resource expertise, including the ability to write training curricula and evaluate learning. Being centrally located in the human resource department makes the best use of resources and helps communicate a common management culture.

Other companies separate training from the human resource function because it allows the training function to be decentralized to better respond to the unique needs in different business units. The training and development department at A. G. Edwards has a learning center and develops training programs for its financial consultants and employees.[147] Representatives of the training department regularly meet with the company's management committee at corporate headquarters, as well as with regional officers and branch managers, to help them understand how training can support business objectives. A new branch manager certification program succeeded because the branch managers were involved in identifying skill gaps and their suggestions were used in the program design. The branch managers took ownership of the program and helped develop the program proposal which they then presented to corporate managers to receive funding and approval for the program. Regardless of the organizational approach used for the training function, it must help meet the training needs of the business.

Preparing to Work in Training

Everyone is a trainer at some point in his or her life. Consider the last time you had to teach some skill to a peer, sibling, spouse, friend, or even your boss. Although some people learn to train by trial and error, the best way is to take courses in training and development, or even choose an academic major related to training. For example, training and development courses are usually found in education, business and management, and psychology departments at colleges and universities. Business schools may offer undergraduate and graduate degrees in human resource management with courses in training and development, talent management, and organizational development. Education departments may have undergraduate and graduate degrees in human resource development and learning. Courses offered with such degrees include instructional design, curriculum development, adult learning, evaluation, and on-the-job training. Psychology departments offer courses in training and development as well. These courses can be part of a degree program in industrial and organizational psychology. If you are fortunate enough to be at a large university, you may have the opportunity to take courses from education, business/management, and the psychology departments that relate to training and development. Also, you should consider the competencies you want to focus on and think about how you will master them (courses, work experience, ATD certification, and so on).

To be a successful training professional requires staying up-to-date on current research and training practices. The primary professional organizations for persons interested in training and development include ATD, the Academy of Human Resource Development (AHRD), the SHRM, the Society for Industrial and Organizational Psychology (SIOP), the Academy of Management (AOM), and the International Society for Performance Improvement (ISPI). Articles about training practices can be found in the following publications: *training, T+D*, *Training and Development*, *Chief Learning Officer*, *Workforce Management*, *HR Magazine*, *Academy of Management Executive*, and *Academy of Management Learning and Education*. Training and development research can be found in the following journals: *Human Resource Development Quarterly*, *Human Resource Development Review*, *Performance Improvement*, *Personnel Psychology*, *Journal of Applied Psychology*, *Academy of Management Journal*, and *Human Resource Management*.

Key Terms

competitiveness *5*

competitive advantage *6*

human resource management *6*

stakeholders *6*

learning *6*

human capital *7*

training *7*

development *7*

formal training and development *7*

informal learning *7*

explicit knowledge *8*

tacit knowledge *8*

knowledge management *8*

training design process *9*

Instructional System Design (ISD) *10*

agile learning or agile instructional design *10*

offshoring *16*

intellectual capital *17*

social capital *17*

customer capital *17*

employee engagement *19*

change *19*

learning organization *20*

diversity *23*

equity *23*

inclusion *23*

talent management *24*

STEM skills *25*

knowledge workers *26*

Total Quality Management (TQM) *28*

Malcolm Baldrige National Quality Award *28*

ISO 9000:2000 *28*

Six Sigma process *30*

lean thinking *30*

ISO 10015:2019 *31*

digital learning *31*

Upskilling *31*

Reskilling *31*

nontraditional employment *34*

gig economy *34*

work teams *35*

cross training *35*

virtual teams *36*

outsourcing *43*

human resource development *44*

Discussion Questions

1. Describe the forces affecting the workplace and learning. How can training help companies deal with these forces?
2. Discuss the relationship between formal training and development, informal learning, and knowledge management. How are they related to learning and creating a learning organization?
3. What steps are included in the training design model? What step do you think is most important? Why?
4. What are intangible assets? How do they relate to training and development?
5. How are companies using training and development to their benefit in today's economy?
6. What is agile learning design? What advantages does it have over traditional instructional design?
7. Explain digital learning. How can it benefit companies? Employees? What are some of its potential limitations?
8. In your opinion, which of the training professionals' capabilities would be most difficult to learn? Which would be easiest?
9. What is the relationship between diversity, inclusion, and equity?
10. Describe the training courses that you have taken. How have they helped you? Provide recommendations for improving those courses.
11. How does training differ between companies that are considered BEST Award winners and those that are not?
12. How has the pandemic influenced current and future training practices?
13. Explain how training relates to attracting new employees, retaining employees, and motivating employees.
14. What is the relationship between talent management and employee engagement? What role can training and development practices play in keeping employee engagement high? Explain.

Application Assignments

1. Go to the Association for Talent Development (ATD) home page on the Internet. The address is www.td.org. Review the jobs found under "Featured Jobs." Choose a job that interests you and explain why. Based on the ATD competency model presented in the chapter, discuss the roles, areas of expertise, and competencies needed in this job.
2. Go to www.nist.gov/baldrige, the website for the National Institute of Standards and Technology (NIST). NIST oversees the Malcolm Baldrige Quality Award. Click on How Baldrige Works and Self-Assessing and review the information provided. How do companies benefit from winning the Baldrige Quality Award? What value could a company get from competing for the award even if it failed to win it?
3. Watch the video at www.youtube.com/watch?v=yrEheaVvzg4, which shows how Sky designed a management development program. Which aspects of agile design did they use? Identify the principles and provide an example described in the video.
4. Watch the video at www.youtube.com/watch?v=O_iHdmMOHZ0, which discusses the shortage of skilled labor in the United States, focusing on the lack of plumbers. What is responsible for the shortage of plumbers? What role does training have in potentially reducing the shortage? What else should plumbing companies consider to help reduce the shortage?
5. Conduct a phone or personal interview with a manager or training manager. Ask this person to describe the role that training plays in his or her company; changes, if any, they have seen in training in the past five years; and how they believe it will change in the future.
6. In March 2021, *training* identified the Top 100 companies for training. The top 10 ranked companies were:
    1. United Wholesale Management
    2. MasTech Utility Services
    3. Haskell
    4. C&A Industries, A Medical Supply Company
    5. Rosedin
    6. State Compensation Insurance Fund
    7. Paychex Inc.
    8. Birmingham Water Works Board
    9. Transworld Systems Incorporated
    10. Midcontinent Independent System Operator

Choose one of these companies to research. Visit the company's website, use a web search engine, or look for references to the company in publications such as *training, T + D, Workforce*, or *HR Magazine*. Prepare a report (not to exceed three pages) based on your research (a) describing why you believe the company was ranked in the top 10 and (b) explaining the relationship between training and the company's competitiveness, business goals, and objectives. Your instructor will advise you on whether the report should be submitted electronically or on hard copy. (*Hint*: Possible reasons a company might be ranked include the amount of money it devotes to training, the level of employee involvement in training, and the type of training used.)

Case Zappos: *Facing Competitive Challenges*

Zappos, based in Las Vegas, is an online retailer with the initial goal of trying to be the best website for buying shoes by offering a wide variety of brands, styles, colors, sizes, and widths. The Zappos.com brand has grown to offer shoes, handbags, eyewear, watches, and accessories for online purchase. Zappos strives to deliver happiness through four Cs: Commerce, Customer Service, Company Culture, and Community. The company wants to offer customers more clothing styles and variety, exceed customer expectations, protect and sustain its company culture, and serve communities in which it operates. Zappos has received many awards for its workplace culture and practices, including being recognized by *Fortune* magazine on its Best Company to Work For list. The company's culture, brand, and business strategy are influenced by 10 core values:

1. Deliver WOW Through Service
2. Embrace and Drive Change
3. Create Fun and a Little Weirdness
4. Be Adventurous, Creative, and Open-Minded
5. Pursue Growth and Learning
6. Build Open and Honest Relationships with Communication
7. Build a Positive Team and Family Spirit
8. Do More with Less
9. Be Passionate and Determined
10. Be Humble

Deliver WOW Through Service means that call center employees need to provide excellent customer service. Call center employees encourage callers to order more than one size or color because shipping and return shipping are free. They are also encouraged to use their imaginations to meet customer needs.

Human Resource's (HR) job at Zappos is to protect the culture and to educate employees. HR focuses on interactions with managers and employees to understand what they need from HR. Zappos's employment practices help perpetuate its company culture. For example, its hiring practices equally weight job skills, the potential to work in Zappos's culture, and a willingness to change and learn. The HR team uses unusual interview questions—such as, How weird are you? and What's your theme song?—to find employees who are creative and have strong individuality. Most of the over 1,500 employees at Zappos are hourly. Every new hire undergoes four weeks of training, during which the company culture must be committed to memory, and spends two weeks dealing with customers by working the telephones. New recruits are offered $2,000 to leave the company during training to weed out individuals who will not be happy working at the company.

Zappos provides many perks in its unique office environment such as free snacks and meals and a full-time life coach (employees have to sit on a red velvet throne to complain). Call center employees can use an online scheduling tool that allows them to set their own hours, and they can earn more pay if they work during hours with greater customer demand. Work is characterized by constant change; a loud, open office environment; and team interactions. To reinforce the importance of the 10 core values, Zappos's performance management system asks managers to evaluate how well employees' behaviors demonstrate the core values, such as being humble or expressing their personalities. To evaluate task performance, managers are asked to regularly provide employees with status reports on such things as how much time they spend on the telephone with customers. The status reports and evaluations of the core values are informational or used to identify training needs. Managers are encouraged to spend time with employees outside of the office, and any employee can reward another employee with a $50 bonus for good performance.

Zappos also believes in helping others understand what inspired the company culture. The company created the Zappos.com library, which provides a collection of books about creating a passion for customer service, products, and local communities. These books can be found in the front lobby of Zappos offices and are widely read and discussed by company employees. Corporate culture is more than a set of values, and it is maintained by a complex web of human interactions. At Zappos, the liberal use of social media including blogs and Twitter facilitates the network that links employees with one another and with the company's customers. Zappos takes the pulse of the organization monthly, measuring the health of the culture with a happiness survey. Employees respond to questions as whether they believe that the company has a higher purpose than profits, whether their own role has meaning, whether they feel in control of their career path, whether they consider their co-workers to be like family and friends, and whether they are happy in their jobs. Opportunities for change are identified from the results of the survey and acted upon. For example, when it was clear from the survey that one department had veered off course and felt isolated from the rest of the organization, a program was instituted that enabled individuals in the group to learn more about how integral their work was.

Zappos uses a management philosophy, holacracy, which gives employees the freedom and responsibility to decide how to get their work done and eliminates people managers. Holacracy allows employees to act more like entrepreneurs and help stimulate new ideas, bring their full selves to work, and have a purpose beyond making money, all of which can benefit the business. Employees work in teams or "circles" rather than as individuals, and team membership can change. To encourage employees to expand their role within their teams or accept a permanent or temporary role on another teams who could benefit from their skills, Zappos created an internal job board. Teams can post specific skills or tasks they need completed on the Role Marketplace. Employees earn badges that recognize their experience and skills they have acquired in their team as well as assisting other teams. The badges make it easy to identify and choose employees who have the qualifications the teams need.

Zappos provides other companies with the opportunity to learn from their practices. Zappos Insights is a department within Zappos created to share the Zappos culture with other companies. Zappos Insights provides programs about building a culture (3-Day Culture Camp), its WOW service philosophy (*School* of WOW), the power of a coaching-based culture (Coaching Event), how the HR function protects the culture and how its programs support it (People Academy), and custom programs. The cost to attend these programs ranges from $2,000 to $6,000 for each attendee.

Tony Hseih, Zappos CEO who retired in August of 2020, is credited for establishing Zappos's unique culture and business success. He unexpectedly died in November 2020 in a house fire in Connecticut.

Here are some resources for you to experience Zappos and better understand holacracy management style. Watch the videos at www.youtube.com/watch?v=0fykBkaLyLA (What it is like to work at Zappos) and www.youtube.com/watch?v=7mkFkbol4c (Why company culture matters). Visit the Zappos website at www.zappos.com. Scroll to the bottom of the page and under "About Zappos" click on "About." Review "What We Live By," "Who We Are," and "How We Work." Under "How we Work," click on "Learn About Holacracy" and gain an understanding of holacracy as a management philosophy. Watch the video "A Little Bit About Holacracy" at www.youtube.com/watch?v=8hejcdYFJ1k. Read www.mycustomer.com/service/management/the-zappos-story-is-holacracy-a-proven-structure-for-improving-customer. Go to www.zapposinsights.com/resources and read the Frequently Asked Questions to see how Zappos helped its employees continue to work during the pandemic. Click on www.zapposinsights.com/about/core-values to learn more details about Zappos's core values.

What challenges discussed in the chapter will have the greatest impact on Zappos's continued success as an online retailer? For each challenge you identify, explain how training and development can help Zappos overcome them. Which of Zappos's 10 core values do you believe training and development can influence the most? The least? Why? Do you think employees at Zappos typically have a high level of engagement? Do you think their level of engagement remained high even during the pandemic? Justify your position.

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CHAPTER TWO

Strategic Training

Objectives

After reading this chapter, you should be able to

2-1 Discuss how business strategy influences the type and amount of training in a company.
2-2 Describe the strategic training and development process.
2-3 Discuss how a company's staffing and human resource planning strategies influence training.
2-4 Explain the training needs created by concentration, internal growth, external growth, and disinvestment business strategies.
2-5 Discuss the advantages and disadvantages of centralizing the training function.
2-6 Explain a corporate university and its benefits.
2-7 Discuss the strengths of a business-embedded learning function.
2-8 Discuss how to create a learning or training brand and why it is important.
2-9 Develop a marketing campaign for a training course or program.

Best Buy: Training Helps Enrich Lives Through Technology

You may be familiar with Best Buy because you have purchased a computer, smartphone, or a television online or from one of their stores. Best Buy, with headquarters outside of Minneapolis, Minnesota, has operations in the United States, Mexico, and Canada employing 125,000 full-time, part-time, and seasonal employees. Typically, customers have the option to shop online, visit a store, or invite a technician into their homes. But the COVID-19 pandemic required Best Buy to move all of its stores to a contactless, curbside-only model. This allowed them to safely serve customers who needed technology that would allow them to work and learn from home. They also suspended all in-home installation and repair and consultation services. Instead, they provide free shipping and product drop off at or near the customer's doorstep. To help customers set up and enjoy their new products, customers can schedule virtual meetings with Best Buy's technicians.

Best Buy's purpose is to enrich lives through technology. The company's Building the New Blue strategy is designed to deliver on that purpose through using technology and touch to meet everyday human need and add new customers while strengthening relationships with current ones. Best Buy's business strategy is supported by four values: Having Fun While Being the Best; Learning from Challenge and Change; Showing Respect, Humility, and Integrity; and Unleashing the Power of Our People.

Pandemic or no pandemic, offering high-quality services and assistance for its customers requires a highly trained and engaged workforce. Best Buy's Learning and Development (L&D) team has both improved the employee learning experience and ensured training and development contributes to the company's strategy.

In recognition of the important role of learning at Best Buy, in 2019, the company was recognized in the Top 10 of the Training Top 125 for the fourth consecutive year.

The L&D team contributed to the employees' learning experience and business strategy in a number of ways. The L&D team created a new virtual learning environment to prepare employees for the holiday sales period, enhanced technology to aid distribution and reinforcement of learning, and focused on recruiting and developing a workforce representative of the diversity in its customers and communities where it operates.

The Virtual Holiday Learning Environment (VHLE) replaced two annual meetings that occurred before the holiday season each year. These meetings were held for leaders to communicate with employees, present holiday selling strategies, and give vendors an opportunity to showcase their latest products and their selling features. The VHLE replicates the annual meeting using Best Buy's learning management system. This virtual environment replicated every aspect of an in-person event. Employees were brought into a visually identical replica of the actual conference center in which the annual meeting was usually held. Once inside, they were greeted by a virtual host and provided instructions for the event. The vendor show had 55 booths, each with a two-minute video highlighting popular holiday products. Employees were required to visit 15 to 20 booths depending on their role. They also could activate "missions," which would reorganize the vendor hall for additional learning. Employees were rewarded for their learning activity by earning points and badges that were displayed in the learning management systems. Employees could use the points to purchase electronics products. VHLE was a success from both a learning and business perspective. Employees completed over one million booth visits and missions involving approximately 36,000 training hours. More than 90 percent of employees completed one training elective. The VHLE resulted in a 19 percent reduction in travel expenses, extended the number of employees participating in the meeting from 13,000 to 85,000, and helped the company exceed its holiday performance goal by 3 percent.

Best Buy also uses innovative technology to deliver training to its employees. For example, to help employees use the skills they learn in training on the job, Best Buy utilizes Bounce Back. As employees complete a course, the decisions they make in response to assignments and scenarios are captured in a database and can be compared to other employees. To help employees use what they learned, Bounce Back can schedule follow-up questions and supplemental information to be delivered after the completion of the training. The L&D team also uses Vyond, an online animation software tool, to rapidly and creatively develop and make available training videos on topics including loss prevention, safety, and product and sales training. Using Vyond has given employees more opportunities to learn in a way that captures their attention and helps them retain the content. Best Buy's knowledge management system gives employees the opportunity to self-author content that will help others perform better in their roles, as well as share feedback to eliminate information that is incorrect or needs improvement.

Best Buy is also taking steps to ensure its workforce reflects the diversity of the communities where it has stores. The company strives to create a work environment that not only supports meeting learning goals but also emphasizes diversity and inclusion of all employees to utilize their unique talents, experiences, beliefs, and help them feel part of the company. Best Buy is also committed to addressing social injustices to improve the company and the communities in which it operates. This ties directly to the company value, Unleash the Power of Our People. For example, the New Wave program is designed to increase the diversity in middle management positions in the corporate office. Candidates are hired even if there is no specific open job that matches their skills. These employees join a development program to prepare them while also working in an area in the company. Best Buy utilizes employee resource groups and diversity and inclusion steering committees to motivate participation in diversity and inclusion efforts, share best practices on effective activities, and influence executives on diversity and inclusion needs. The company's Candid Conversations' initiative encourages open discussions between employees on topics that are difficult to discuss in the workplace. The goal of this forum is to nurture genuine inclusion by encouraging employees to create connections with each other through building trust and empathy. Best Buy created a Task Force for Racial Equity, made up of

19 employees from across the company, to address issues such as the career development and advancement of Black, Indigenous, and People of Color (BIPOC) employees and how the company can better support BIPOC technology businesses.

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Introduction

As the chapter's opening vignette shows, training at Best Buy supports the business strategy. Recognizing that learning is part of all employees' responsibilities, both managers and peers, along with training professionals, are actively involved in helping other employees gain new skills and perspectives. This helps to reinforce the value of learning and its importance for the business. Best Buy recognizes that learning through training and development is critical for winning in the marketplace.

Why is the emphasis on strategic training important? Companies are in business to make money, and every business function is under pressure to show how it contributes to business success or else it faces spending cuts and even outsourcing. To contribute to a company's success, training activities should help the company achieve its business strategy. Some research shows that learning and development may become even more strategically important to organizations after the pandemic.[1] A May survey by LinkedIn Learning found that 74 percent of global respondents believe building new skills is the most critical part of rebuilding organizations for the post-COVID-19 world. Some 66 percent of those respondents also said their learning function has emerged as a more strategic part of their organizations during the pandemic.

A **business strategy** is a plan that integrates the company's goals, policies, and actions.[2] The strategy influences how the company uses physical capital (e.g., plants, technology, and equipment), financial capital (e.g., assets and cash reserves), and human capital (employees). The business strategy helps direct the company's activities (production, finance, marketing, and human resources) to reach specific goals. The goals are what the company hopes to achieve in the medium- and long-term future. Most companies' goals include financial goals, such as to maximize shareholder wealth. But companies have other goals related to employee satisfaction, industry position, and community service.

There are both direct and indirect links between training and business strategy and goals. Training that helps employees develop the skills needed to perform their jobs directly affects the business. Giving employees opportunities to learn and develop creates a positive work environment, which supports the business strategy by attracting talented employees, as well as motivating and retaining current employees.

Consider how Aerospace Corporation uses training in ways that support the business and consider its urgency and available resources.[3] Aerospace Corporation, a nonprofit firm that supports the U.S. government's defense and intelligence program, has over 3,500 employees, most of whom are scientists or in technical fields needed to work on space and ground support systems. Aerospace's corporate vision is to provide engineering solutions to the nation's most complex challenges. This vision is supported by its values: dedication to mission success, technical excellence, commitment to our people, integrity, and objectivity. To support its vision and values Aerospace provides 40 hours of learning each year for every employee. The emphasis on continuous learning is supported by how training is delivered. Because its workforce operates in 40 different locations and it needs to carefully account for how government-provided dollars are spent, Aerospace uses a 50–50 mix of face-to-face classroom instruction, a learning management system, and collaboration tools such as Sharepoint. This helps keep travel and lodging costs to attend training programs low, yet gives employees access to training wherever they are located.

Business strategy has a major impact on the type and amount of training that occurs and whether resources (money, trainers' time, and program development) should be devoted to training. Also, strategy influences the type, level, and mix of skills needed in the company. Strategy has a particularly strong influence on determining the following:

1. The amount of training devoted to current or future job skills.
2. The extent to which training is customized for the particular needs of an employee or is developed based on the needs of a team, unit, or division.
3. Whether training is restricted to specific groups of employees (such as persons identified as having managerial talent) or open to all employees.
4. Whether training is planned and systematically administered, provided only when problems occur, or developed spontaneously as a reaction to what competitors are doing.
5. The importance placed on training compared to other human resource management (HRM) practices, such as selection and compensation.[4]

This chapter begins with a discussion of how training is evolving. Traditionally, training has been seen as an event or program designed to develop specific, explicit knowledge and skills. But managers and trainers and human resource professionals have begun to recognize the potential contribution to business goals of knowledge that is based on experience, which is impossible to teach in a training program, and they have broadened the role of training to include learning and designing ways of creating and sharing knowledge. The chapter goes on to discuss the process of strategic training and development, including identifying business strategy, choosing strategic training and development initiatives that support the strategy, providing training and development activities that support the strategic initiatives, and identifying and collecting metrics to demonstrate the value of training. The chapter next describes organizational factors that influence how training relates to the business strategy. These include the roles of employees and managers, top management support for training, integration of business units, staffing and human resource planning strategy, degree of unionization, and manager, trainer, and employee involvement in training. The chapter addresses specific strategic types and their implications for training. Then the chapter emphasizes that for strategic learning, training, and development to be adopted, accepted, and used by managers and employees, it is important to consider it from a change model and marketing perspective. The chapter ends with a description of several different ways of organizing the training function, emphasizing that the business-embedded and corporate university models are gaining in popularity as companies are aligning training activities with business goals.

The Evolution of Training: From an Event to Learning

As more companies such as Best Buy recognize the importance of learning for meeting business challenges and providing a competitive advantage, the role of training in companies is changing.

Recall the discussion in **Chapter One**, "Introduction to Employee Training and Development," of the different ways that learning can occur in a company. Learning occurs through training, development, informal learning, and knowledge management. Training and development programs that are organized and created by the company (i.e., formal training and development programs) are one way to ensure that employees learn. In less strategic approaches, training involves a series of programs or events that employees are required to attend. After attending the training program, employees are responsible for using what they learned in training on the job, and any support they might receive is based on the whims of their manager. Also, such training provides no information to help employees understand the relationship between the training content and their job performance, development objectives, or business goals. This type of training usually fails to improve workplace performance and meet business needs. The role of training as a program or event will continue into the future because employees will always need to be taught specific knowledge and skills. This approach assumes that business conditions are predictable, they can be controlled by the company, and the company can control and anticipate the knowledge and skills that employees need in the future. These assumptions are true for certain skills, such as communication and conflict resolution. However, these training events or programs will need to be more closely tied to performance improvement and business needs to receive support from top management. The training design model, presented in **Chapter One**, and the different aspects of the model, discussed in **Chapters Three** through **Eight**, will help you understand how to design training programs that can improve employee performance and meet business needs.

Learning as a Strategic Focus

The Learning Organization

Many companies, recognizing the strategic importance of learning, have strived to become learning organizations. As discussed in **Chapter One**, a **learning organization** is a company that has an enhanced capacity to learn, adapt, and change.[5] In learning organizations employees seek, share, and apply new knowledge and skills to improve both their personal and organizational performance. Learning is part of the organizational values and culture. Training processes are carefully scrutinized and aligned with company goals. In a learning organization, training is seen as one part of a system designed to create human capital. One estimate is that about one-third of all companies have an extensive learning organization, but the majority have at least some of the characteristics. Does having learning as a strategic focus influence the "bottom line"? It appears so. High-performing companies are five times more likely than low performing companies to have a strong learning culture.

At United Wholesale Mortgage, a lending company, two of the core values are "People Are Our Greatest Asset" and "Continuous Improvement Is Essential for Long-Term Success."[6] United cultivates a culture that gives people development high priority and wants them to learn every day. Continuous improvement training and coaching is conducted daily in all areas of the company in half-hour or one-hour time periods as determined by the business areas (available remotely and in-person prior to COVID-19). The training is required in all areas of the company each day, and participation/completion is reported weekly to senior leadership. All employees, known as team members, must complete a minimum of three hours of the training each month. Training is scheduled throughout the company one week in advance, and topics vary based on business unit needs, skill gaps by role, or industry trends. Each business unit training team and business leaders within that unit (such as sales, operations, loan underwriting) create specific learning objectives. The business unit training team creates, designs, reviews, schedules, and delivers continuous improvement training and coaching to their team members in their business unit. Completion of the training is reinforced several ways. Completion is linked to all career and promotion paths. Training completion is linked to annual goals and management bonuses and compensation. Because learning is part of the company culture, the completion of training hours is used for team, area, and companywide contests. The training has been found to be related to sales and service. Account executives are providing better help to clients. As a result, loan submissions increased by 77 percent over the previous year. Loan errors and defects decreased and client requests were resolved in 90 minutes over 80 percent of the time.

The essential features of a learning organization appear in **Table 2.1**. Note that the learning organization emphasizes that learning occurs not only at the individual employee level (as we traditionally think of learning), but also at the team and organizational levels. In learning organizations, high-level leaders provide guidance to the training and development function through serving on advisory boards and often participate as instructors or speakers in training and development programs. The learning organization emphasizes knowledge management.

TABLE 2.1 Key Features of a Learning Organization

Supportive Learning Environment
- Employees feel safe expressing their thoughts about work, asking questions, disagreeing with managers, and admitting mistakes.
- Different functional and cultural perspectives are appreciated.
- Employees are encouraged to take risks, innovate, and explore the untested and unknown, such as trying new processes and developing new products and services.
- Thoughtful review of the company's processes is encouraged.

Learning Processes and Practices
- Knowledge creation, dissemination, sharing, and application are practiced.
- Systems are developed for creating, capturing, and sharing knowledge.
- Every employee has a development plan and is accountable for completing the learning included in the plan.

Managers Reinforce Learning
- Managers actively question and listen to employees, encouraging dialogue and debate.
- Managers are willing to consider alternative points of view.
- Time is devoted to problem identification, learning processes and practices, and post-performance audits.
- Learning is rewarded, promoted, and supported.

Sources: Based on S. Thomke, "Building a Culture of Experimentation," *Harvard Business Review,* March–April 2020, pp. 40–48; M. Ho and M. Jones (eds.). *Building a Culture of Learning* (Alexandria, VA: The Association for Talent Development, 2016); A. Edmonson, "Strategies for Learning from Failure," *Harvard Business Review,* April 2011, pp. 48–55; F. Gino and G. Pisano, "Why Leaders Don't Learn From Success," *Harvard Business Review,* April 2011, pp. 68–74; D. Garvin, A. Edmondson, and F. Gino, "Is Yours a Learning Organization?" *Harvard Business Review,* March 2008, pp. 109–116.

One of the most important aspects of a learning organization is the ability for employees to learn from failure and from successes. That is, learning includes understanding why things happen and why some choices lead to certain outcomes.[7] Both success and failure trigger investigation, which help employees revise assumptions, models, and theories. For example, Apple's Newton tablet failed miserably when it was introduced in 1990. However, the failure caused Apple to reexamine its theories about what makes successful products. As a result, Apple recognized that a touchphone would be accepted more easily by consumers because of the existing smartphone market. Subsequently, using what it learned about the iPhone helped Apple develop a more successful tablet, the iPad. Pixar, which has created a number of successful and acclaimed animated films, still conducts reviews of the process used to make each of its films. For example, Pixar asks employees the top five things they would do and not do again. This is important to gain a better understanding of the reasons behind successful performance so they can be shared by others. Learning from failure and success requires providing employees with the opportunity to experiment with products and services, similar to what happens in engineering and scientific research. Some of the conditions necessary for successful experimentation include that it involves genuine uncertainty, the cost of failure is small and contained, the risks of failure are understood and eliminated if possible, and there is an understanding that failure still provides important information, success is defined, and the opportunity is significant.

At Walt Disney Company over the last 10 years, training has evolved to include flexible learning delivery, customized learning experiences, and collaborative development with internal training customers.[8] Disney has moved from an instructor-led training approach to an approach that uses face-to-face instruction (either in a classroom or on the job) combined with online instruction (e.g., via game simulation and e-learning). This suits Disney's business strategy, which has always emphasized matching the appropriate technology and methods to the audience regardless of whether the audience is a guest or an employee (cast member).

A single training event or program is not likely to give a company a competitive advantage because explicit knowledge is well known and programs designed to teach it can be easily developed and imitated. However, tacit knowledge developed through experience and shared through interactions between employees is impossible to imitate and can provide companies with a competitive advantage. Pixar, a subsidiary of Walt Disney Company, has enjoyed huge success with its computer-animated films, including *Finding Dory* (the blue tang fish Dory helps us learn about the meaning of family) and *Luca* (the story about two boys discovering themselves during a summer trip in Northern Italy). These and its other films required the cooperation of a team of talented directors, writers, producers, and technology artists who were located in different buildings, had different priorities, and spoke different technical languages.[9] Pixar follows three operating principles: (1) all employees must have the freedom to communicate with other employees, regardless of their position or department; (2) it must be safe for everyone to offer ideas; and (3) the company must maintain awareness of innovations occurring in the academic community. Pixar University offers a collection of in-house courses for training and cross-training employees within their specialty areas. But it also offers optional classes that provide opportunities for employees from different disciplines to meet and learn together. Screenplay writing, drawing, and sculpting are directly related to the business, while courses in Pilates and yoga are not. The courses are attended by employees with all levels of expertise—from novices to experts—which reinforces the idea that all employees are learning and it is fun to learn together.

Implications of Learning for Human Capital Development

The emphasis on learning has several implications. First, there is a recognition that to be effective, learning has to be related to helping the employee improve performance and the company achieve its business goals. This connection helps ensure that employees are motivated to learn and that the limited resources (time and money) for learning are focused in areas that will directly help the business succeed. Second, unpredictability in the business environment in which companies operate will continue to be the norm. Because problems cannot be predicted in advance, learning needs to occur on an as-needed basis. Companies need to move beyond the classroom and instead use job experiences, online learning, and mobile learning to help employees acquire knowledge and skills while they focus on business problems. Third, because tacit knowledge is difficult to acquire in training programs, companies need to support informal learning that occurs through mentoring, social networks, and job experiences. Fourth, learning has to be supported not only with physical and technical resources but also psychologically. The company work environment needs to support learning, and managers and peers need to encourage learning and help employees find ways to obtain learning on the job. Also, managers need to understand employees' interests and career goals to help them find suitable development activities that will prepare them to be successful in other positions in the company or deal with expansion of their current job. **Chapter Five**, "Program Design," discusses how to create a work environment that supports training and learning.

Creating and sharing knowledge refers to companies' development of human capital. As discussed in **Chapter One**, human capital includes cognitive knowledge (know what), advanced skills (know how), system understanding and creativity (know why), and self-motivated creativity (care why).[10] Traditionally, training has focused on cognitive and advanced skills. But the greatest value for the business may be created by having employees understand the manufacturing or service process and the interrelationships between departments and divisions (system understanding), as well as motivating them to deliver high-quality products and services (care why). To create and share knowledge, companies have to provide the physical space and technology (e-mail, websites, social networks) to encourage employee collaboration and knowledge sharing. Ford Motor Company has communities of practice organized around functions.[11] For example, all the painters in every Ford assembly plant around the world belong to the same community. At each plant, one of the painters serves as a "focal point." If a local painter discovers a better way to improve one of the 60 steps involved in painting, the focal person completes a template describing the improvement and its benefits. The template then is submitted electronically to a subject-matter expert located at Ford headquarters, who reviews the practice and decides whether it is worth sharing with other assembly plants. If so, the practice is approved and sent online to the other assembly plants. Ford has collected $1.3 billion in projected value for the company and has realized over $800 million of actual value from its communities of practice.

As companies recognize the value of training and development and view them as part of a broader learning strategy, seven key capabilities are needed.[12] These capabilities are:

1. Alignment of learning goals to business goals.
2. Measurement of the overall business impact of the learning function.
3. Movement of learning outside the company to include customers, vendors, and suppliers.
4. A focus on developing competencies for the most critical jobs.
5. Integration of learning with other human resource functions, such as knowledge management, performance support, and talent management.
6. Delivery approaches that include classroom training as well as e-learning.
7. Design and delivery of leadership development courses.

These capabilities are part of the strategic training and development process, which is discussed next.

The Strategic Training and Development Process

Now that you understand how training is evolving in companies and have been introduced to the concept of business strategy and how training can support a business strategy, you are ready to study the process of strategic training and development. **Figure 2.1** shows a model of the strategic training and development process with examples of strategic initiatives, training activities, and metrics.

FIGURE 2.1 **The Strategic Training and Development Process**

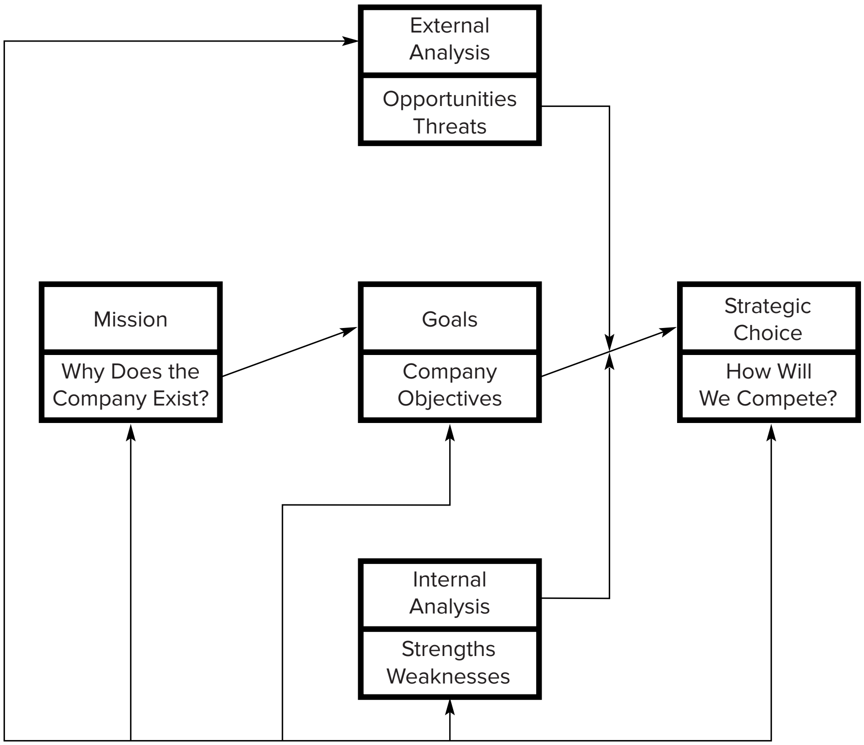
The model shows that the process begins with identifying the business strategy. Next, strategic training and development initiatives that support the strategy are chosen. Translating these strategic training and development initiatives into concrete training and development activities is the next step of the process. The final step involves identifying measures or metrics. These metrics are used to determine whether training has helped contribute to goals related to the business strategy. The following sections detail each step in the process.

Business Strategy Formulation and Identification

Five major components are part of developing a new business strategy or changing an existing one.[13] **Figure 2.2** shows the components. The first component is the company **mission**, which is a statement of the company's reason for existing. Company missions vary, but they typically include information on the customers served, why the company exists, what the company does, the value received by the customers, and the technology used. The mission statement is often accompanied by a statement of the company's vision or values. The **vision** is the picture of the future the company wants to achieve, while **values** are what the company stands for. A recent survey of talent development professionals showed that more than half of organizations reported having formal values, pillars, or a mission statement that specifically mentions talent development or learning.[14]

The second component is the company **goals**, which are what the company hopes to achieve in the medium to long term; they reflect how the mission will be carried out. Training can contribute to a number of different business goals, as shown in **Table 2.2**. Both for-profit and not-for-profit companies often include goals related

FIGURE 2.2 **Formulating the Business Strategy**



to satisfying stakeholders. The term *stakeholders* refers to shareholders (if the company is publicly traded and for-profit), the community, customers, employees, and all the other parties that have an interest in seeing that the company succeeds.

TABLE 2.2 **Possible Business Goals Influenced by Training**

Productivity
Reduced scrap and rework
Increased customer satisfaction
Reduced operational risks and accidents due to employee carelessness
Increased employee satisfaction and retention
Increased time and value-producing goods, such as increase in billable project time hours
Better management decisions
Increased development of human capital
Succession planning needed for competitive advantage and growth

Source: Based on R. Rivera, "How to Demonstrate Value: Key Measures Every Learning Professional Should Know," in *WLP Scorecard: Why Learning Matters* (Alexandria: VA: ASTD Press, 2007), pp. 17–24.

The third and fourth components, external and internal analysis, are combined to form what is called a SWOT analysis. A **SWOT analysis** consists of an internal analysis of strengths and weaknesses and an external analysis of opportunities and threats to the company; these may currently exist or be anticipated. **External analysis** involves examining the operating environment to identify opportunities and threats. The business challenges identified in **Chapter One** can represent opportunities (or threats) to the company. Examples of opportunities include customers and global markets who are not being served, technology that can help the company, and unused or underutilized potential sources of talented employees. Threats might include changes in the economy, talent and leadership shortages, new competitors, and changes in legislation that can adversely affect the company. **Internal analysis** attempts to identify the company's strengths and weaknesses. It focuses on examining the available quantity and quality of financial, physical, and human capital. The last component in formulating the business strategy is strategic choice. After completing the SWOT analysis, the company (usually managers involved in strategic planning) has all the information it needs to consider how to compete, generate several alternative business strategies, and make a strategic choice. The decisions that a company has to make regarding how to compete are shown in **Table 2.3**. The possible alternative strategies are compared based on their ability to achieve the company's goals. The **strategic choice** represents the strategy believed to be the best alternative to achieve the company's goals.

TABLE 2.3 **Decisions a Company Must Make About How to Compete to Reach Its Goals**

1. **Where to compete?** In what markets (industries, products, etc.) will we compete?
2. **How to compete?** On what outcome or differentiating characteristic will we compete? Cost? Quality? Reliability? Delivery? Innovativeness?
3. **With what will we compete?** What resources will allow us to beat the competition? How will we acquire, develop, and deploy those resources to compete?

Source: R. Noe, J. Hollenbeck, B. Gerhart, and P. Wright, "Strategy—Decisions About Competition," in *Human Resource Management: Gaining a Competitive Advantage*, 12th ed. (Burr Ridge, IL: Irwin/McGraw-Hill, 2019), p. 79.

For example, the CEO of Texas Health Resources (THR) challenged all of the company leaders to make the company more competitive. Based on a SWOT analysis, he stressed to the leaders that their functions needed to be more affordable, more innovative, and to contribute to providing consistent health care to customers.[15] To support its new vision focused on transforming the patient experience, THR is emphasizing value creation in its learning strategy. To do so, THR established a learning and development committee consisting of executives and the Chief Learning Officer. The committee established new learning goals including making the best use of existing resources, maximizing the use of technology, and reducing time spent in required learning. To meet these goals, THR has engaged in several initiatives. It has established MyTalent, an online learning management system that provides training resources. Also, THR now uses artificially intelligent mannequins that simulate lifesaving scenarios. Employees can demonstrate their skills on the dummy, receive feedback, and renew their required certification without attending formal classes, saving time and money.

Although these decisions are equally important, companies often pay less attention to the "With what will we compete?" issue, resulting in failure to reach the goals. This decision includes figuring out how human, physical, and financial capital will be used. To use human capital to gain a competitive advantage requires linking the company's human resources practices (such as training and development) to the business strategy.

Identify Strategic Training and Development Initiatives That Support the Strategy

Strategic training and development initiatives are learning-related actions that a company should take to help it achieve its business strategy.[16] The strategic training and development initiatives vary by company depending on a company's industry, goals, resources, and capabilities. The initiatives are based on the business environment, an understanding of the company's goals and resources, and insight regarding potential training and development options. They provide the company with a road map to guide specific training and development activities. They also show how the training function will help the company reach its goals (and in doing so, show how the training function will add value).

There is a tendency to have a disconnect between the strategy and the execution of the strategy. To avoid this, learning professionals need to reach out to managers to ensure that the strategic training initiatives and training activities are aligned with the business strategy and that the necessary financial resources and support are provided to carry out the training activities.[17]

To contribute to a company's business strategy, it is important that the training function understands and supports it and provides value to its customers. Linking training initiatives to business plans is important because business plans describe company priorities or plans and include descriptions of who will be involved; the context and how it might affect the plan; how the plan will be carried out (operations); and what decisions have to be made, including those involving training and development, to increase the likelihood that the plan will succeed. Busey, a financial holding company, has five business areas: retail, mortgage, commercial, cash management, and wealth management.[18] It strives to serve its employees, customers, communities, and shareholders. Its strategic plan includes two priorities that focus on training and development. One of the priorities is to develop best practices for maintaining a positive, engaged, and consistent culture. The other priority is to continue to implement state-of-the art talent management and development practices to meet the company's needs.

Table 2.4 shows strategic training and development initiatives and their implications for training practices. *Diversify the learning portfolio* means that companies may need to provide more learning opportunities than just traditional training programs. These learning opportunities include informal learning that occurs on the job through interactions with peers; new job experiences; personalized learning opportunities using mentors, coaches, and feedback customized to employee needs; and the use of digital learning solutions. Such training is self-paced and available outside a formal classroom environment (these learning opportunities are discussed in **Chapters Seven**, **Eight**, and **Nine**).

TABLE 2.4 Strategic Training and Development Initiatives and Their Implications

Strategic Training and Development Initiatives	Implications
Diversify the Learning Portfolio	• Use technology, such as the Internet, for training • Facilitate informal learning • Provide more personalized learning opportunities
Expand Who Is Trained	• Train customers, suppliers, and employees • Offer more learning opportunities to nonmanagerial employees
Accelerate the Pace of Employee Learning	• Quickly identify needs and provide a high-quality learning solution • Reduce the time to develop training programs • Facilitate access to learning resources on an as-needed basis
Improve Customer Service	• Ensure that employees have product and service knowledge • Ensure that employees have skills needed to interact with customers • Ensure that employees understand their roles and decision making authority
Provide Development Opportunities and Communicate with Employees	• Ensure that employees have opportunities to develop • Ensure that employees understand career opportunities and personal growth opportunities • Ensure that training and development addresses employees' needs in current job as well as growth opportunities
Capture and Share Knowledge	• Capture insight and information from knowledgeable employees • Organize and store information logically • Provide methods to make information available (e.g., resource guides, websites)
Align Training and Development with the Company's Direction	• Identify needed knowledge, skills, abilities, or competencies • Ensure that current training and development programs support the company's strategic needs
Ensure that the Work Environment Supports Learning and Transfer of Training	• Remove constraints to learning, such as lack of time, resources, and equipment • Dedicate physical space to encourage teamwork, collaboration, creativity, and knowledge sharing • Ensure that employees understand the importance of learning • Ensure that managers and peers are supportive of training, development, and learning

Sources: Based on A. Landers, "Do You Know How to Create an Actionable Learning Strategy?" *Chief Learning Officer,* April 2017, pp. 45–47, 57; S. Tannenbaum, "A Strategic View of Organizational Training and Learning," in *Creating, Implementing, and Managing Effective Training and Development*, ed. K. Kraiger (San Francisco: Jossey-Bass, 2002), pp. 10–52.

Accenture's gamified cybersecurity training program supports its business strategy by motivating employees to adopt appropriate security behavior in the company and in interactions with clients.[19] It also contributes to a continuous learning culture. The gamified nature of the program increases employees' willingness to participate because it is fun and competitive (over 75 percent of Accenture's employees have participated in the program). Employees receive virtual badges for completing each level of the program. New cybersecurity threats are quickly incorporated into the program and employees who have completed the program are notified when new content is available. Tata Consultancy Services (TCS) is focused on the upskilling of all technical associates in digital technologies.[20] TCS uses a variety of learning methods including online learning, hands-on exercises, discussions with subject matter expert connect sessions, physical boot camps, on-demand practice environments, hackathons, assessments, case studies, and projects.

Expand who is trained refers to the recognition that because employees are often the customer's primary point of contact, they need as much if not more training than managers do. Development at Argo Group focuses on early career professionals with fewer than five years specialty insurance experience.[21] It also includes second-career individuals, veterans, and professionals changing industries. All participants benefit from professional skills development and deeper industry knowledge.

Also, to provide better customer service to suppliers, vendors, and consumers, companies need to distribute information about how to use the products and services they offer. Companies are beginning to train suppliers to ensure that the parts suppliers provide will meet their customers' quality standards. To be successful, companies have to be able to deal with changes in technology, customer needs, and global markets. Training needs have to be identified quickly and effective training provided. That is, companies have to *accelerate the pace of employee learning*. Also, companies are relying on performance support systems that provide employees with immediate access to information, advice, and guidance (performance support systems are discussed in more detail in **Chapter Five**). Performance support systems can be accessed through personal computers, tablets, or mobile phones whenever they are needed. DISH Network provides four easy-to-use apps to its customer experience agents.[22] These four apps replace the more than 30 tools agents previously used to assist customers. The apps allow agents to access the information they need with more speed and efficiency, which helps keep them customer-focused. The use of the apps reduced new hire training time by 14 hours, which was projected to save at least $260,000. Also, after the apps were provided to the agents, the survey score measuring successful solutions of customers' issues increased by 76 percent. At the start of the COVID-19 pandemic, many companies had to quickly pivot from face-to-face instruction to online learning. For example, Gables Residential rapidly developed and delivered more than 30 different classes on new topics, including how to manage a remote workforce and conducting virtual apartment tours.[23] The company also provided virtual mindfulness-related classes to help employees cope with the anxiety and fear essential workers felt caring for residents (some with COVID-19) and coworkers. Intel was already starting to use technology to deliver training, but the pandemic accelerated the pace of adoption.[24] Intel converted any previous in-person offerings to digital and on-demand channels. The company also created a new curriculum that covers timely topics important to employees today such as remote work, leading virtual teams, mental health, wellness, and work space design. Employees can access the courses and curriculum on their mobile devices. This allows them to learn when and where is convenient for them.

Employees must be prepared to *improve customer service*. Employees have to be knowledgeable about the product or service, and they need to have customer service skills. At Intermedia.net Inc., new employees need to learn about many different services and processes.[25] To aid their learning, the company moved to a blended learning approach. The blended learning approach includes training simulations and gamification components to complement the instructor-led training. Intermedia.net uses key performance indicators to measure the success of its new hire curriculum to ensure they are meeting minimum requirements within 90 days of taking customer calls. Two of three key performance indicators were met and exceeded. New hires first call resolution was 82.18 percent (goal: 80 percent), customer satisfaction was 9.4 (goal: 8.5), and productivity was 2.2 (goal: 2.5).

Providing development opportunities and communicating them to employees is important to ensure that employees believe that they have opportunities to grow and learn new skills. Such opportunities are important for attracting and retaining talented employees. Gilbane Building Company's two-year development program for early career project engineers is an important part of the company's strategy to accelerate the development of high potentials.[26] Participants in the development program participate in "critical experiences" that build their core building skills, introduce them to project financial management practices, and help them build relationships with peers and leaders through a capstone project. The result has been an increase the retention rate (93 percent) of the project engineers. Birmingham Water Works Board's certificate program is the utility's way of developing its next generation of leaders.[27] The training consists of nine classes and completion of a leadership experience involving an improvement project. Fifty-four percent of the program participants have already been promoted.

Capturing and sharing knowledge ensures that important knowledge about customers, products, or processes is not lost if employees leave the company. Also, giving employees access to knowledge that other employees have may quicken response times to customers and improve product and service quality. For example, rather than "reinventing the wheel," service personnel can tap into a database that allows them to search for problems and identify solutions that other service reps have developed. Training at CNO Financial Group gives new first-line managers the skills to develop their team of agents.[28] In addition to formal training, CNO provides the opportunity to hear from senior leadership on the importance and expectations of their role and from a panel of peers. The concepts and skills emphasized in the training are reinforced by providing the managers with monthly video topics created by company leaders. An online chatroom is provided for managers who have completed the program to share experiences and best practices.

Aligning training and development with the company's strategic direction is important to ensure that training contributes to business needs. Companies need to identify what employee capabilities (e.g., knowledge, skills) are needed and whether training programs and services are helping to improve these capabilities. Chief executive officers (CEOs) appreciate the value of learning but want training to be relevant, take less time, and enable employees to quickly use new skills and knowledge on the job.

Consider how training and development are aligned with strategic direction at Microchip Technology.[29] To increase market share, Microchip Technology has relied on a strategy of acquiring other companies. The key to successfully acquiring and integrating the acquisitions is Microchip's company culture. Microchip communicates its culture through an onboarding and integration program. In the program, managers learn to facilitate change within their teams. Employees build skills to cope with challenges while learning Microchip's culture and values.

Finally, *a supportive work environment* is necessary for employees to be motivated to participate in training and learning activities, use what they learn on the job, and share their knowledge with others. Tangible support includes time and money for training and learning, as well as work areas that encourage employees to meet and discuss ideas. Psychological support from managers and peers for training and learning is also important. Types of tangible and psychological support for training are discussed in **Chapter Five**. International SOS training provides its managers with the tools and knowledge they need to achieve results.[30] In the blended learning training, managers complete reflective workbook exercises online and learn theory via an instructional video. Next, they attend facilitated virtual training sessions that immerse them in practical scenarios. To support the application of what they learned in training, each manager is assigned a mentor. The mentor meets with them regularly to discuss the management challenges and opportunities they are facing. Managers who have completed the training are encouraged to meet with each other once each business quarter to share how they are applying what they learned.

How might a company ensure that its training and development initiatives are linked to its business strategy? **Table 2.5** shows the questions that a company needs to answer to identify and develop its strategic training and development initiatives. To help answer these questions, trainers need to read the annual reports, strategic plans, earnings releases, and analyst reports for their companies. To understand the business strategy and its implications for training, it may be useful to invite managers to attend training and development staff meetings and present information on the company's business strategy. Also, in companies with multiple divisions, it is important to understand each business, including how it measures effectiveness, how it monitors and reports performance, and what challenges it faces, such as supply chain management, new product development, competitive pressures, or service warranty issues.

TABLE 2.5 Questions to Ask to Develop Strategic Training and Development Initiatives

1. What is the vision and mission of the company? Identify the strategic drivers of the business strategy.
2. What capabilities does the company need as a result of the business strategy and business environment challenges?
3. What types of training and development will best attract, retain, and develop the talent needed for success?
4. Which competencies are critical for company success and the business strategy?
5. Does the company have a plan for making the link between training and development and the business strategy understood by executives, managers, and employees or customers?
6. Will the senior management team publicly support and champion training and development?
7. Does the company provide opportunities for training and developing not only individuals but also teams?

Source: Based on R. Hughes and K. Beatty, "Five Steps to Leading Strategically," *T+D,* December 2005, pp. 46–48.

Provide Training and Development Activities Linked to Strategic Training and Development Initiatives

After a company chooses its strategic training and development initiatives related to its business strategy, it then identifies specific training and development activities that will enable these initiatives to be achieved. These activities include developing initiatives related to the use of new technology in training, increasing access to training programs for certain groups of employees, reducing development time, and developing new or expanded course offerings. For example, Verizon's strategic priorities include to be on the leading edge of technology, to provide customers with the best network experiences in the world, to deliver growth in revenue and profitability, to expand 5G leadership, to sustain value to shareholders, and to enable services that benefit society and make the world a better place.[31] During the pandemic, Verizon's learning and development team expanded its strategic training and development initiatives to include reskilling or upskilling nearly 20,000 employees to assume roles across the company and support other business critical needs. This included over 8,000 retail team employees who were redeployed due to temporary store closures to customer service and telesales positions. Operations and training activities made it possible for this redeployment to occur. Operations teams shipped employees equipment to enable work-from-home, and learning and development teams reskilled the reps for their new roles. Content for the reskilling training was repurposed from existing customer service and telesales onboarding programs and redesigned for virtual instructor-led deployment. The training was delivered via a blend of virtual instructor-led training, self-guided digital learning, digital performance support, post-training trainer support, and daily leader reinforcements. The learning and development team also developed and delivered leadership transition training for retail store leaders temporarily redeployed to telesales leadership roles.

Identify and Collect Metrics to Show Training Success

How does a company determine whether training and development activities actually contribute to the business strategy and goals? This determination involves identifying and collecting **metrics**, business-level outcomes chosen to measure the overall value of training or learning initiatives. Examples of metrics include measures of employee retention, employee engagement, customer service, productivity, and quality. It is important to recognize the difference between training program outcomes and business metrics. Typically, training program evaluation involves measuring trainee satisfaction with the program, assessing improvements in trainee knowledge, skills, and abilities, or identifying if the program influenced business results such as productivity. Training evaluation, used for determining the effectiveness of training courses or programs, is discussed in more detail in **Chapter Six**, "Training Evaluation." In comparison to training evaluation outcomes, metrics focus on results rather than on other outcomes. They are strategic business-related measures. That is, they are not linked to one course or program but are chosen to represent the expected value of several programs or learning initiatives.

The metrics should be directly linked to the business strategy and goals. For example, metrics might evaluate customer service, employee satisfaction or engagement, employee turnover, number of product defects, time spent in product development, number of patents, or time spent filling management positions. For example, consider the metrics Verizon used to evaluate the success of its reskilling initiative discussed previously.[32] Between April and September 2020, retail sales employees moved to customer service roles handled 4 million customer service calls (15.6 percent of total call volume). This improved overall average time of the calls by 45 seconds and lowered average speed of answer by 18 seconds across customer service. Retail sales employees moved to telesales roles handled 874,000 sales calls (46 percent of all telesales calls). They accomplished a $5 higher average accessory sales per device than traditional telesales reps. The average call handle time decreased from 532 seconds in the first month they were in their new position to 430 seconds in the third month.

Some companies use the balanced scorecard as a process to evaluate all aspects of the business. The **balanced scorecard** is a means of performance measurement that provides managers with a chance to look at the overall company performance or the performance of departments or functions (such as training) from the perspective of internal and external customers, employees, and shareholders.[33] The balanced scorecard considers four different perspectives: customer, internal, innovation and learning, and financial. The emphasis and type of indicators used to measure each of these perspectives are based on the company's business strategy and goals. The four perspectives and examples of metrics used to measure them include:

- Customer (time, quality, performance, service, cost)
- Internal (processes that influence customer satisfaction)
- Innovation and learning (operating efficiency, employee satisfaction, continuous improvement)
- Financial (profitability, growth, shareholder value)

Metrics that might be used to assess training's contribution to the balanced scorecard include number of employees trained (employees trained divided by total number of employees), training costs (total training costs divided by number of employees trained), and training costs per hour (total training costs divided by total training hours). For example, EMC Corporation, a technology company, uses a balanced scorecard to track and measure learning.[34] Company performance is tracked quarterly with metrics measuring business alignment, workforce readiness, time-to-market, globalization, and effectiveness. The company has also implemented performance metrics that are directly linked to present and future business needs. Employees are given individual development plans that are based on an analysis of their jobs. Ingersoll Rand requires its business units to make strong business cases for new spending.[35] Following this model, Ingersoll Rand University (IRU) shows that learning makes a difference and contributes to the business strategy by using metrics such as expected benefits, one-time versus ongoing costs, shelf-life of learning products, and employee participation rates in its programs. Each year, IRU provides the company with an annual report communicating accomplishments, challenges, strategic directions, and operational efficiencies. For example, IRU has offered process improvement workshops related to Lean Six Sigma (a quality initiative), which is a business priority. IRU has been able to demonstrate that its workshops have saved the company hundreds of thousands of dollars by reducing vendor delivery costs by 76 percent. The process of identifying and collecting metrics is related to training evaluation, the final step in **Figure 1.2** in **Chapter One**. **Chapter Six** discusses the different types of outcomes used to evaluate a training program's metrics in more detail. Of course, showing that training directly relates to the company's "bottom line" (e.g., increased service, sales, or product quality) is the most convincing evidence of the value of training.

Examples of the Strategic Training and Development Process

Consider the strategic training and development process in two very different companies: Dollar General and Mike's Carwash. Dollar General's stores are known for their low prices on products including food, health and beauty aids, cleaning supplies, clothing, and housewares.[36]

Dollar General's mission, Serving Others, influences its customers, employees, and the communities in which it operates. For its customers, Dollar General works every day to deliver value and convenience through all of its neighborhood general stores. It also continually seeks to build loyalty and trust with its customers. For its employees, this means respect and the opportunity to grow and develop their careers. For the communities, serving others means supporting them. Dollar General's key to success is growing the business without sacrificing the company's mission. Dollar General operates more than 16,000 stores with 143,000 employees trained each year. Training courses are offered in instructor-led classroom or virtual classrooms and as online self-paced modules. One sign of the importance Dollar General places on training to support the growth of the business is that the company expects employees to spend more than 1.7 million hours in training.

To support the business growth, Dollar General's training and development team engaged in several strategic training and development initiatives and activities. One of the strategic training initiatives related to accelerating the pace of employee learning. The training and development team worked with the vice president of store operations to improve the company's process for onboarding new employees. To do so they evaluated, selected, and prepared high-performing store managers to become certified store training managers (CSTM). The certification process for a CSTM requires the individual to complete 10 train-the-trainer modules. Program evaluation led to the addition of two new modules to the program. The first new module focuses on balancing the priorities of managing a store and training a new employee at the same time. The second new module is about supporting new store managers.

Another strategic training initiative focused on diversifying the learning portfolio, providing development opportunities, and ensuring that training is supported. District Manager (DM) training includes blended learning opportunities paired with support from multiple business partners. The program includes courses, in-store training opportunities and activities, online learning through the company's learning management system, and continuous check-ins with the regional director, human resources and loss prevention partners, and the training program manager. Subject matter experts and training managers facilitate discussions during the classroom learning portion of the program. The district managers also participate in a simulation about a month-in-the-life of a DM. The simulation includes actual scenarios DMs may encounter in their job. Dollar General also plans to continue to diversify the learning portfolio by providing DMs with an app they can use to access the training program. This would give DMs access to learning resources and allow them to complete learning activities directly from their mobile device when there is time in their schedule.

Accelerating the pace of employee learning and diversifying the learning portfolio helps promote Dollar General's mission of Serving Others, in this case by providing employees with growth opportunities. A key metric used to assess the extent to which this initiative is paying off is the rate of internal promotions and placements. Approximately 12,000 current store managers are promoted from within Dollar General. The company has created approximately 35,000 new career opportunities for employees in the last five years. Dollar General prides itself on its rate of internal promotions and placements, which is over 56 percent. This means that over half of Dollar General's open positions were filled by employees already working for Dollar General.

To support its current and future growth, Dollar General developed an app to help employees more quickly understand new or changed processes. The app provides a review of various systems and employees can review them at any time. Also, the app automatically customizes learning to the employee's current level of knowledge. The use of the app has reduced training time and costs and enhanced employees' retention.

Mike's Carwash, based in Indianapolis, Indiana, is a privately owned chain of car washes with 28 locations in Indiana, Ohio, and Kentucky.[37] Opened in 1948, the first Mike's was called "Mike's Minit Man Carwash," named after the type of equipment originally used. Mike's later reorganized into two different companies, Crew Carwash and Mike's Carwash, as part of the family's succession plan. Mike's Carwash's mission and vision and examples of its values are shown in **Table 2.6**. **Figure 2.3** shows how Mike's Carwash links its business strategy to training and development.

TABLE 2.6 Mike's Carwash: Vision, Mission, and Values

Vision
"We will be the service leader by embracing innovation and providing opportunities for team members to reach their full potential, while ensuring profitable growth."
Mission
To create lifelong customers by delivering a clean, fast, friendly experience through engaged and valued team members.
Values
Team members, integrity, giving back, fun.

Sources: From "People-Focused Culture" from www.mikescarwash.com, accessed February 27, 2021; "Mike's Car Wash Overview," Zippia, from www.zippia.com, accessed February 27, 2021.

FIGURE 2.3 How Mike's Carwash Links Training and Development to Business Strategy

Business Strategy →	Strategic Training and Development Initiatives →	Training and Development Activities →	Metrics that Show the Value of Training
• Delight the Customer	• Diversify the Learning Portfolio	• Orientation	• Return Customer
• Repeat Business	• Expand Who Is Trained	• Development Plan	• Revenue
• Consistent Service	• Improve Customer Service	• Internal Certification	• Customer Satisfaction
• Growth	• Provide Development Opportunities	• Online Training	• Mystery Shopper Scores
		• Managers Accountable for Employees Training and Provide Coaching to Improve Other Skills	• Ensure Work Environment Supports Learning and Transfer

The intent of Mike's mission is to create lifetime customers by delivering a clean, fast, friendly experience through engaged and valued team members. Mike's business strategy supports its mission: consistent and speedy service, return customers, and growing the business each year. Mike's Carwash provides an automated carwashing service and features equipment, systems, and technology developed by Mike's employees. Mike's credits some of its success to the Dahm family's business smarts but believes that most of its success comes from its employees and its hiring and training practices. Mike's original founders, Joe and Ed Dahm, were known to tell employees that the company was truly in the people business—it just happened to wash cars. Its mission is to provide friendly and fast service to the boss (i.e., the customer) at a good value.

Customer satisfaction is very important to Mike's, with the emphasis placed on repeat business by serving customers so they will come back again. The biggest challenge that Mike's faces is providing a consistently enjoyable customer experience. Mike's is constantly trying to improve the customer experience through innovation and new ideas. If a new idea works, it is implemented in all locations. Mike's believes that the only way to provide a consistent customer experience is not only through finding great employees, but through training and development of those employees. The company website explains that it is "notoriously picky" when it comes to hiring. For every 50 people Mike's considers hiring, just one is hired. Mike's uses training and development to retain and engage its employees. Each employee has a development plan and receives performance appraisals twice each year. New employee training involves familiarizing them with best practices and how to help customers in different situations that they will encounter at the car wash. Before employees wait on their first customer, they receive two days of orientation and participate in workshops that focus on customer service, how to treat customers, how to recover from service errors and mistakes, and how to deal with difficult customers. Mike's also provides training to help employees advance in the company. The career path from hourly associate to supervisor to shift manager to assistant manager is well defined. Movement on the career path is possible through good performance and completing internal certifications that include up to 12 weeks of training and three exams requiring grades of at least 80 percent. Employee engagement and satisfaction are measured by semiannual surveys, as well as by gathering information from employees who are leaving Mike's. Employees play an important role in the choice and design of training and development activities. A 15- to 20-person team, consisting of members who have been nominated by their store manager, serve a one-year term as subject-matter experts in helping to develop new training programs and modify existing ones. Team members also are the first trainees in new programs, providing feedback about needed changes and feedback on program effectiveness.

In addition to its regular training programs for new employees and certification programs for advancement, Mike's has developed programs to meet its emerging business needs. The recent economic recession resulted in a decrease in the volume of customers Mike's served, as well as in revenue. As a result, Mike's recognized the need to increase the spending of its customers by making sure that employees made them aware of value-added services such as underbody washes, tire treatments, and clear coat application. To do this, Mike's developed an online training module and taught managers to encourage employees to complete their training and practice using their selling skills at monthly employee meetings.

Mike's recognizes the important role that managers play in helping employees learn. At Mike's, managers need to actively support and help deliver training. They are held accountable for training and developing employees in order to advance and succeed. In this program, managers were taught how to identify weaknesses in employees' service recommendation techniques and use weekly coaching sessions to enhance them. Managers were also encouraged to observe and document employees making service recommendations to customers and to provide them with feedback. The results of this program were positive: overall revenue, revenue per customer, customer satisfaction, and "mystery shopper" scores all increased.

Organizational Characteristics That Influence Training

The amount and type of training, as well as the organization of the training function in a company, are influenced by many factors, among them: company size; employee and manager roles; top management's support for training; the company's degree of integration of business units; the company's global presence; business conditions; other HRM practices, including staffing strategies and human resource planning; the extent of unionization; and the amount of involvement in training and development by managers, employees, and human resource staff.[38]

Company Size

Training differs between small and large firms.[39] As you might expect, on average smaller companies have smaller training budgets ($507,000) than midsize ($808,000) or large companies ($22 million). The types of training methods used by small, midsized, and large companies do not vary except for the use of new technology-based training delivery methods. Large companies appear more inclined to experiment with new technologies than small or midsize organizations. For example, one survey found that 17 percent of large companies currently are using virtual reality and artificial intelligence and 6 percent are using augmented reality. Ten percent or less of small- and midsize companies are using virtual reality and 5 percent or less are using artificial intelligence and augmented reality (we will discuss these training methods in **Chapter Eight**).

Most training in small firms is usually informal and on-the-job. Company owners, managers, or more experienced employees take responsibility for training. Employees are trained to do their jobs in the way that the owner prefers. Training tends to focus on the knowledge and skills that employees need for their current job and not on developing skills needed for future positions. If any type of formal training and development is conducted, it is done through trade associations, short courses, and courses provided by the company's owners and managers. This occurs for several reasons. In small firms (often considered to have between 0 and 250 employees), the owner rather than a trainer or training manager is more likely to make training decisions. Training and development may not be one of the key priorities of the owner because he or she is focused on running the business and may lack the money and skills needed to design effective courses and programs. Owners may be concerned that investing in training their employees prepares them to leave to join other firms. One of the benefits of informal and on-the-job training is that it allows small firms to be more flexible in adapting the type of training provided to employees as changes in business demands and new challenges and problems occur. As firms grow in size there is a greater need to provide more formalized training and development to prepare current employees for internal promotion opportunities and retain them. Also, formal training and development helps attract new employees.

Roles of Employees and Managers

The roles of employees and managers in a company influence the focus of training, development, and learning activity. With the increased emphasis on the creation of intellectual capital and the use of high-performance work systems using teams, employees today are performing many roles once reserved for management (e.g., hiring, scheduling work, and interacting with customers, vendors, and suppliers).[40] If companies are using teams to manufacture goods and provide services, team members need training in interpersonal problem solving and team skills (e.g., how to resolve conflicts and give feedback). If employees are responsible for the quality of products and services, they need to be trained to use data to make decisions, which involves training in statistical process control techniques. As discussed in **Chapter One**, team members may also receive training in skills needed for all positions on the team (cross training), not just for the specific job they are doing. To encourage cross training, companies may adopt skill-based pay systems, which base employees' pay rates on the number of skills in which they are competent, rather than the skills they are using for their current jobs.

Research suggests that today's managers are expected to do the following:[41]

- *Manage individual and team performance*. Motivate employees to change performance, provide performance feedback, and monitor training activities. Clarify individual and team goals and ensure alignment with company goals.
- *Develop employees and encourage continuous learning*. Explain work assignments and provide technical expertise. Create an environment that encourages learning. Provide mentoring and coaching.
- *Plan and allocate resources*. Translate strategic plans into work assignments and establish target dates for projects.
- *Coordinate activities and interdependent teams*. Persuade other units to provide products or resources needed by the work group, and understand the goals and plans of other units. Ensure that the team is meeting internal and external customer needs.
- *Manage group performance*. Define areas of responsibility, meet with other managers to discuss the effects of changes in the work unit on their groups, facilitate change, and implement business strategy.
- *Facilitate the decision making process*. Facilitate team and individual decision making. Encourage the use of effective decision making processes (e.g., dealing with conflict, statistical process control).
- *Create and maintain trust*. Ensure that each team member is responsible for his or her workload and customers. Treat all team members with respect. Listen and respond honestly to team ideas.
- *Represent one's work unit*. Develop relationships with other managers, communicate the needs of the work group to other units, and provide information on work group status to other groups.

Regardless of their level in the company (e.g., senior management), all managers are expected to serve as spokespersons to other work units, managers, and vendors (i.e., represent the work unit). Of course, the amount of time that managers devote to some of these roles is affected by their level. Line managers spend more time managing individual performance and developing employees than mid-level managers or executives do. The most important roles for mid-level managers and executives are planning and allocating resources, coordinating interdependent groups, and managing group performance (especially managing change). Executives also spend time monitoring the business environment by analyzing market trends, developing relationships with clients, and overseeing sales and marketing activities.

To manage successfully in a team environment, managers need to be trained in "people skills," including negotiation, sensitivity, coaching, conflict resolution, and communication skills. A lack of people skills has been shown to be related to managers' failure to advance in their careers.[42]

Top Management Support

The CEO, the top manager in the company, and other members of the executive team, play a key role in determining the importance of training and learning in the company. In companies in which learning is highly aligned with company values, the performance of the training and development function is carefully monitored by senior company leaders and executives.[43] The CEO is responsible for:[44]

- Setting a clear direction for learning (vision).
- Providing encouragement, resources, and a commitment to strategic learning (sponsor).
- Taking an active role in governing learning, including reviewing goals and objectives and providing insight on how to measure training effectiveness (governor).
- Developing new learning programs for the company (subject-matter expert).
- Teaching programs or providing resources online (faculty).

- Serving as a role model for learning for the entire company and demonstrating a willingness to learn constantly (learner).
- Promoting the company's commitment to learning by advocating it in speeches, annual reports, interviews, and other public relations tools (marketing agent)

Consider how the CEO and members of the executive team at Leading Real Estate Companies of the World, New York Community Bancorp, and Signature Consultant encourage and support training.[45] At Leading Real Estate Companies of the World, all of the top company executives take responsibility for training and learning. The chief executive officer's vision serves as the motivation behind the company's online learning platform. The CEO also regularly meets with the company's learning team to provide feedback on current courses and ideas for new ones. The chief operating officer supports the learning team by ensuring they have the in-house production resources needed to produce high-quality instructional materials, videos, and workshops. The chief financial officer monitors the training budget, helps the learning team determine the financial value of programs, and reports financial results. At New York Community Bancorp, the executive management team helps ensure the company's training plan supports the company's strategy. Every month the corporate director of employee development and training reviews key training goals and the progress toward meeting those goals with the chief operating officer and chief administrative officer. Signature Consultant's founder and chief executive officer provides feedback on the training and development strategy and helps emphasize the importance of learning. The manager of the training and development team also worked in the operations part of the business, which helps ensure that training is linked to the business and is seen as credible and necessary.

CEO support for training is especially important to get lower level managers to support it. CEO support helps ensure that managers are committed to ensuring that training is effective (e.g., giving trainees feedback on the job). Without CEO support, training's potential impact on helping the company reach its goals may be limited because managers may feel that training is a "necessary evil" forced on them by the training department rather than a means of helping them to accomplish business goals.

Many companies, such as IBM, General Mills, and Randstad of North America, have created leadership positions to foster continuous learning and knowledge management. **Chief learning officers (CLOs)**, also known as **knowledge officers**, are the leaders of a company's knowledge management efforts. CLOs play a key role in adopting learning and development strategies that support the business. They also help companies deal with challenges that they are facing such as the need to reskill employees due to job changes resulting from automation and foster continuous learning in order to successfully deal with change. CLOs also develop, implement, and link a knowledge/learning culture with the company's technology infrastructure, including databases and intranets. CLOs locate knowledge and find ways to create, capture, and distribute it. The CLO has to ensure that trainers, information technologists, and business units support and contribute to the development of knowledge management practices.[46] For example, to ensure that training meets Deloitte's business needs and supports the business strategy, each of the company's eight Chief Learning Officers focus on the business goals related to client services, market growth, operational performance, and talent.[47] The goals serve as the basis for learning and development priorities and strategies for each year.

Integration of Business Units

The degree to which a company's units or businesses are integrated affects the kind of training that takes place. In a highly integrated business, employees need to understand other units, services, and products in the company. Training likely includes rotating employees between jobs in different businesses so they can gain an understanding of the whole business.

Global Presence

As noted in **Chapter One**, the development of global product and service markets is an important challenge for U.S. companies. For companies with global operations, training is used to prepare employees for temporary or long-term overseas assignments. Also, because employees are geographically dispersed outside the United States, companies need to determine whether training will be conducted and coordinated from a central U.S. facility or will be the responsibility of satellite installations located near overseas facilities. A key challenge is ensuring learning is effective for all employees regardless of the language they speak or their cultural background.

Consider how globalization has affected the training practices of Philips, TELUS, and Etihad Airways.[48] Philips, the Dutch technology company, focuses on health-care, lighting, and consumer lifestyle products. Philips's learning function has to serve employees in more than 100 different countries. As a result, the company has developed a standard global learning approach that is locally appropriate. Philips has global standards in place to ensure learning is high quality, but each business unit is encouraged to tailor learning to match learners' needs at the location. For example, in India and China, employees are encouraged to learn using one-on-one coaching, but in Europe employees are more receptive to learning that is delivered online.

TELUS, the Canadian telecommunications company, provides learning and development to its contact center outsourcing subsidiary located in Central America. It provides a program that teaches English and job skills to students. The students are recruited from rural areas where there are few job opportunities. They receive wages while they train and are given jobs in the company when they complete the program. TELUS also benefits by having available a motivated and skilled workforce. All of the program participants want to stay with TELUS International to further their careers and they are in the group of top performing employees in the company.

Etihad Airways, a Persian Gulf airline, operates in English, which is the second language for almost all of its employees. As a result, Etihad revised its training program to include more visual learning for its employees, who come from 113 different countries. Interactive computer programs teach flight attendants how to set a business-class dinner table to the airline's standards by clicking and dragging pictures rather than reading instructions. Also, Etihad has invested millions of dollars into full-motion simulators for flight attendants. The simulators can create turbulence, pour smoke into a cabin, and light fires in storage areas or overhead bins. Trainees have to learn how to evacuate the plane and open cabin doors from simulated bad landings that happen when nose wheels collapse or the plane lands on its side.

Business Conditions

When unemployment is low and/or businesses are growing at a high rate and need more employees, companies often find it difficult to attract new employees, find employees with necessary skills, and retain current employees.[49] Companies may find themselves in the position of hiring employees who might not be qualified for the job. Also, in these types of business conditions, companies need to retain talented employees. In a knowledge-based economy (including the information technology and pharmaceuticals areas), product development depends on employees' specialized skills. Losing a key employee may cause a project to be delayed or hinder a company's taking on new projects. Training plays a key role in preparing employees to be productive, as well as motivating and retaining current employees. Studies of what factors influence employee retention provide the following top reasons for staying with a company: working with good colleagues, having challenging job assignments, and getting opportunities for career growth and development. Across all industries, from high-tech to retailing, companies are increasingly relying on training and development to attract new employees and retain current ones. For example, at Allianz Life Insurance Company of North America, the learning and development team partnered with human resources and operations teams to create a new hire training program designed to reduce turnover in the company's call centers.[50] The new training program is completed over 120 days. This gives call center employees the opportunity to learn a skill, apply it in customer calls, and then return to training to learn a new skill. Spreading training over a longer period of time helps call center employees reduce their anxiety and increase their skills in taking customer calls. As a result of the new program, new hire turnover decreased 20 percent.

Changes in consumer tastes and preferences and changing business models also influence training. For example, for several years, the retail industry has been moving from relying on physical stores to a hybrid model including online shopping, ordering, and customer pickup. The COVID-19 pandemic accelerated this shift. Consider how business conditions during the pandemic have affected training at stores such as Best Buy (featured in the chapter opener) and Walmart.[51] Consumers have moved from purchasing electronics from a physical Best Buy store to buying them online. Its online sales represented 43 percent of its total sales in the United States in the last fiscal quarter of 2020, almost double compared with the same time the previous year. The pandemic also caused Best Buy to increase curbside pickup of online orders and convert store space to warehouse space. As a result, Best Buy trained more store employees to do multiple jobs. For example, employees needed to be trained in virtual sales and chat, phone, and remote customer support and service.

To enhance its competitiveness in the new retail model, Walmart has made several different training investments. First, Walmart is training associates in topics including online grocery pickup and customer satisfaction. To make this training as realistic as possible, Walmart is using virtual reality, which allows employees to interact with customers as if they were actually physically present in a store. Second, Walmart changed its onboarding process for new employees, emphasizing the company's commitment to quality customer service. Third, Walmart has opened regional training academies. Walmart Academies, based in working supercenters, include both classroom and sales floor training. The training emphasizes advanced retail skills and soft skills like leadership, communications, and change management. Employees, Walmart, and customers all benefit from the training. The training provides employees with skills they need for advancement, which in turn helps lower turnover rates. When employees enact the skills learned in training in their jobs, it helps improve customers' shopping experience.

For companies in an unstable or recessionary business environment—one characterized by mergers, acquisitions, or disinvestment of businesses—training may be abandoned, left to the discretion of managers, or become more short-term (such as offering training courses only to correct skill deficiencies rather than to prepare staff for new assignments). These programs emphasize the development of skills and characteristics needed (e.g., how to deal with change), regardless of the structure the company takes. Training may not even occur as the result of a planned effort. Employees who remain with a company following a merger, acquisition, or disinvestment usually find that their job now has different responsibilities and requires new skills. For employees in companies experiencing growth—that is, an increased demand for their products and services—there may be many new opportunities for lateral job moves and promotions resulting from the expansion of sales, marketing, and manufacturing operations or from the start-up of new business units. These employees are usually excited about participating in development activities because new positions often offer higher salaries and more challenging tasks.

During periods when companies are trying to revitalize and redirect their business, earnings are often flat. As a result, fewer incentives for participation in training—such as promotions and salary increases—may be available. In many cases, companies downsize their workforces as a way of cutting costs. Training activities under these conditions focus on ensuring that employees are available to fill the positions vacated by retirement or turnover. Training also involves helping employees avoid skill obsolescence. (Strategies to help employees avoid skill obsolescence are discussed in **Chapter Ten**.)

Other HRM Practices

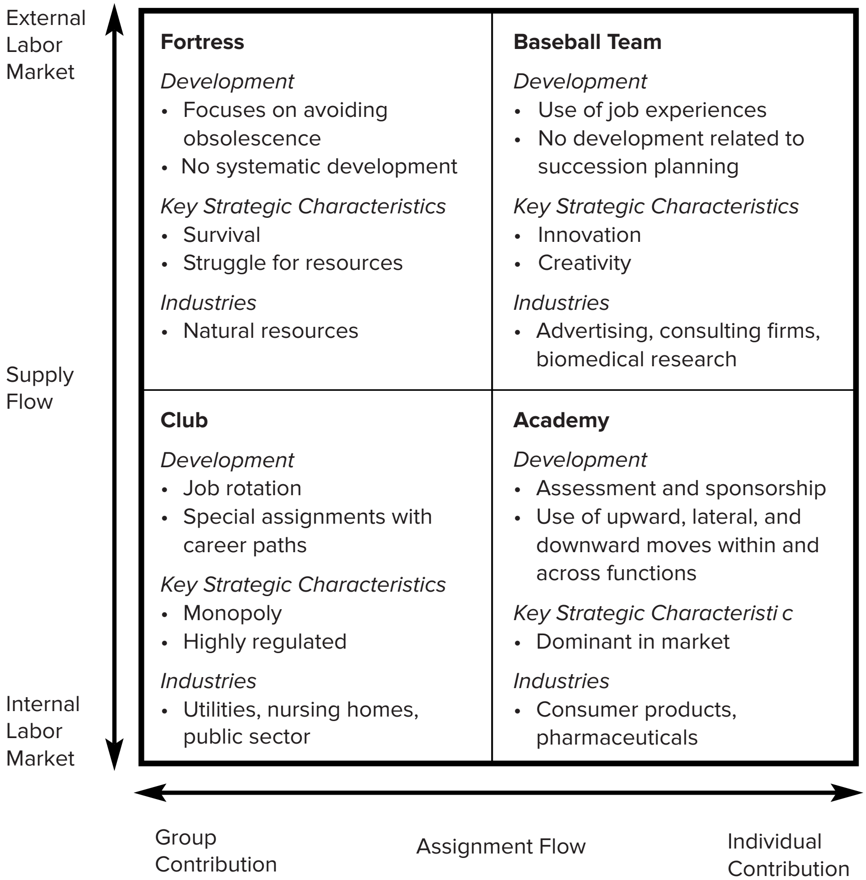
Human resource management (HRM) practices consist of the management activities related to investments—time, effort, and money—in staffing (e.g., determining how many employees are needed, and recruiting and selecting employees), performance management, training, and compensation and benefits. Companies that adopt state-of-the-art HRM practices that contribute to business strategy tend to demonstrate higher levels of performance than firms that do not.[52] These HRM practices contribute to the attraction, motivation, and retention of human capital (the knowledge, skills, and abilities embedded in people), which can help a company gain a competitive advantage. Training, along with selection, performance management, and compensation influence attraction, motivation, and retention of human capital. Training helps develop company-specific skills, which can contribute to productivity and ultimately company performance. Also, training helps provide the skills that employees need to move to new jobs within the company, therefore increasing their satisfaction and engagement. The type of training and the resources devoted to training are influenced by staffing strategy, the strategic value of jobs and employee uniqueness, and human resource planning.

Staffing Strategy

Staffing strategy refers to the company's decisions regarding where to find employees, how to select them, and the desired mix of employee skills and statuses (temporary, full-time, etc.). It is important for you to recognize that training and development and learning opportunities can vary across companies because of differences in companies' evaluation of the labor market, their staffing strategy, or the strategic value and uniqueness of jobs or positions. For example, one staffing decision a company has to make is how much to rely on the internal labor market (within the company) or external labor market (outside the company) to fill vacancies. Two aspects of a company's staffing strategy influence training: the criteria used to make promotion and assignment decisions (assignment flow) and the places from which the company prefers to obtain the human resources to fill open positions (supply flow).[53]

Companies vary in terms of the extent to which they make promotion and job assignment decisions based on individual performance or group or business-unit performance. They also vary in terms of the extent to which their staffing needs are met by relying on current employees (internal labor market) or employees from competitors and recent entrants into the labor market, such as college graduates (external labor market). **Figure 2.4** displays the two dimensions of staffing strategy. The interaction between assignment flow and supply flow results in four distinct types of companies: fortresses, baseball teams, clubs, and academies. Each company type places a different emphasis on training activities. For example, some companies (such as medical research companies) emphasize innovation and creativity. These types of companies are labeled "baseball teams." Because it may be difficult to train skills related to innovation and creativity, they tend to handle staffing needs by luring employees away from competitors or by hiring graduating students with specialized skills. "Academies" tend to be companies that are dominant in their industry or markets, such as Procter & Gamble (P&G), and rely primarily on training and developing their current employees (i.e., the internal labor market) to fill new positions and managerial roles. "Clubs" tend to be companies in highly regulated industries such as energy or health care that rely on developing talent from their internal labor market but also rely on team or department performance to determine promotions or opportunities to obtain important development activities or assignments. "Fortresses" include companies in industries that are undergoing significant change and struggling for survival. In these companies, financial and other resources are not available for development so they tend to rely on hiring talent from outside (i.e., from the external labor market) on an "as-needed" basis. **Figure 2.4** can be used to identify development activities that support a specific staffing strategy. For example, if a company wants to reward individual employee contributions and promote from within (the bottom-right quadrant of **Figure 2.4**), it needs to use lateral, upward, and downward moves within and across functions to support the staffing strategy.

FIGURE 2.4 Implications of Staffing Strategy for Training



Source: Adapted from J. A. Sonnenfeld and M. A. Peiperl, "Staffing Policy as a Strategic Response: A Typology of Career Systems," *Academy of Management Review 13* (1988), pp. 588–600.

Strategic Value of Jobs and Employee Uniqueness

Another strategic consideration affecting how companies invest in training and development resources is based on different types of employees. For example, companies may distinguish between training and development activities for managers and individual contributors. Managers may receive development opportunities such as job experiences and international assignments that individual contributors do not because they are being evaluated and prepared for leadership positions in the company. Another way different types of employees can be identified is based on their strategic value and uniqueness to the company.[54] **Uniqueness** refers to the extent to which employees are rare and specialized and not highly available in the labor market. **Strategic value** refers to employee potential to improve company effectiveness and efficiency. This results in four types of employees: knowledge-based workers (high value and uniqueness), job-based employees (high value and low uniqueness), contract employees (low value and low uniqueness), and alliance/partnerships (high uniqueness and low value).

Consider a pharmaceutical company, which includes many different employee groups including scientists (knowledge-based workers), lab technicians (job-based workers), secretarial and administrative staff (contract employees), and legal advisers (alliance/partnerships). Because knowledge-based employees possess valuable and unique skills, the company is expected to invest heavily in training and developing them, especially in developing skills specific to the company's needs. Job-based employees are likely to receive less training than knowledge-based employees because although they create value for the firm, they are not unique. If they receive training, it tends to focus on skills that they require to perform their jobs. Their development opportunities are limited unless they have been identified as outstanding performers. The training for contractual workers is typically limited to ensuring that they comply with company policies and legal- or industry-based licensure and certification requirements. Because they are not full-time employees of the company but provide valued services, training for alliance/partnership employees tends to focus on encouraging them to share their knowledge and using team training and experiential exercises designed to develop their trust and relationships with job-based and knowledge-based employees.

Human Resource Planning

Human resource planning includes the identification, analysis, forecasting, and planning of changes needed in the human resource area to help the company meet changing business conditions.[55] Human resource planning allows the company to anticipate the movement of human resources in the company because of turnover, transfers, retirements, or promotions. Human resource plans can help identify where employees with certain types of skills are needed in the company. Training can be used to prepare employees for increased responsibilities in their current job, promotions, lateral moves, transfers, and downward moves or demotions that are predicted by the human resource plan.

Extent of Unionization

Unions' interest in training has resulted in joint union-management programs designed to help employees prepare for new jobs. When companies begin retraining and productivity-improvement efforts without involving unions, the efforts are likely to fail. The unions may see the programs as just another attempt to make employees work harder without sharing the productivity gains. Joint union-management programs (detailed in **Chapter Ten**) ensure that all parties (unions, management, and employees) understand the development goals and are committed to making the changes necessary for the company to make profits and for employees to both keep their jobs and share in any increased profits.

Training Needs in Different Strategies

Table 2.7 describes four business strategies—concentration, internal growth, external growth, and disinvestment—and highlights the implications of each for training practices.[56] Each strategy differs based on the goal of the business. Research suggests a link between business strategy and the type and amount of training.[57] **Table 2.7** shows that training issues vary greatly from one strategy to another. A **concentration strategy** focuses on increasing market share, reducing costs, or creating and maintaining a market niche for products and services. Companies focusing on a market niche (a concentration strategy) need to emphasize skill currency and the development of their existing workforce. Consider how NetApp changed its learning strategy to support a concentration strategy.[58] NetApp had to extend its platform to support customers as they transitioned to the cloud. Faced with the increasing depth of NetApp solutions, rapidly changing technologies, and the emergence of a new type of learner, NetApp needed a new learning approach to remain relevant and effective. The new learning plan focused on using new technology delivery methods and providing employees with the opportunity to learn anytime and anyplace.

TABLE 2.7 Implications of Business Strategy for Training

Strategy	Emphasis	How Achieved	Key Issues	Training Implications
Concentration	• Increased market share • Reduced operating costs • Market niche created or maintained	• Improve product quality • Improve productivity or innovate technical processes • Customize products or services	• Skill currency • Development of existing workforce	• Team building • Cross training • Specialized programs • Interpersonal skill training • On-the-job training
Internal Growth	• Market development • Product development • Innovation • Joint ventures • Mergers • Globalization	• Market existing products/add distribution channels • Expand global market • Modify existing products • Create new or different products • Expand through joint ownership • Identify and develop managers	• Creation of new jobs and tasks • Innovation • Talent management	• High-quality communication of product value • Cultural training • Development of organizational culture that values creative thinking and analysis • Technical competence in jobs • Manager training in feedback and communication • Conflict negotiation skills
External Growth (Acquisition)	• Horizontal integration • Vertical integration • Concentric diversification	• Acquire firms operating at same stage in product market chain (new market access) • Acquire business that can supply or buy products • Acquire firms that have nothing in common with acquiring firm	• Integration • Redundancy • Restructuring	• Determination of capabilities of employees in acquired firms • Integration of training systems • Methods and procedures of combined firms • Team building • Development of shared culture
Disinvestment	• Retrenchment • Turnaround • Divestiture • Liquidation	• Reduce costs • Reduce assets • Generate revenue • Redefine goals • Sell off all assets	• Efficiency	• Motivation, goal setting, time management, stress management, cross training

continued

Strategy	Emphasis	How Achieved	Key Issues	Training Implications
				• Leadership training • Interpersonal communications • Outplacement assistance • Job-search skills training

An **internal growth strategy** focuses on new market and product development, innovation, mergers, and joint ventures. Companies with an internal growth strategy face the challenge of identifying and developing talent. HCL Technologies, an IT consulting firm, grew its business and as a result added new employees.[59] To be successful, HCL employees must stay current on new tools and mobile and web technologies. To ensure that its employees' skills are up to date, HCL developed a technical academy that provides online learning, classroom instruction, on-the-job experiences, and mentoring. To facilitate employees' continuous improvement, employees are encouraged to complete technical certifications through taking courses and learning through virtual online labs that simulate real technical environments. Ninety percent of the learning programs are developed internally. HCL has invested millions of dollars in learning, but through this investment, the company believes it can stay ahead of the competition and grow the business. HCL has found that employees who finish certification programs generate more billable hours, stay employed with the company longer, and are more satisfied. New companies that are formed from a merger or acquisition need to ensure that employees have the skills needed to help the company reach its new strategic goals. Also, for mergers and acquisitions to be successful, employees need to learn about the new, merged organization and its culture.[60] The organization must provide training in systems, such as instruction on how the e-mail and company intranet work. Managers need to be educated on how to make the new merger successful (e.g., dealing with resistance to change).

An **external growth strategy** emphasizes acquiring vendors and suppliers or buying businesses that will allow the company to expand into new markets. Dell Technologies has recently gone through large-scale acquisition and integration due to merger with EMC.[61] This created the need to unify and combine distinct talent strategy efforts and initiatives across a variety of business units and needs. The resulting talent strategy focused on leadership development, diversity and inclusion, and recent graduates. The outcome helped build a strong talent pipeline and create a company reputation that attracts and retains leaders.

A **disinvestment strategy** emphasizes liquidation and divestiture of businesses. Divesting companies need to train employees in job-search skills and focus on cross-training remaining employees who may find themselves in jobs with expanding responsibilities.

A disinvestment strategy resulted in Edwards Lifesciences being spun off from another company.[62] The new company's management team developed a new strategic plan that described goals for sales growth, new product development, customer loyalty, and employee commitment and satisfaction. The company realized that it had to prepare leaders who could help the company meet its strategic goals. A review of leadership talent showed that leadership development was needed, and a leadership program was created in response. The program was designed to include 20 participants from different functions and company locations. Part of the week-long program is devoted to a simulation in which teams of managers run their own business and take responsibility for marketing, manufacturing, and financials. The sessions also include classes taught by company executives, who speak about important topics such as the company's business strategy.

Models of Organizing the Training Department

Most companies want their learning or training function to provide some courses and programs to all employees regardless of their functional area, location, business unit, or division. These courses and programs are developed (or purchased from training vendors or suppliers) and delivered by learning staff working at corporate headquarters or at a corporate university. At the same time, companies want their learning function to provide learning that meets training needs that are unique to a business unit or product line.

One of the important decisions that companies have to consider in choosing how to organize the training department (or learning function) is the extent to which training and learning is centralized. Typically, companies do not choose to entirely centralize or decentralize training and learning. Rather, they organize the training department or learning function in a way that best supports the business strategy and helps meet its needs. This typically involves an approach in which some learning is provided by a corporate learning function or corporate university and other learning is customized, developed, and delivered specifically for a function, product line, or location (business-embedded). **Centralized training** means that training and development programs, resources, and professionals are primarily housed in one location and that decisions about training investment, programs, and delivery methods are made from that department.

Advantages of a centralized training function include: it helps drive stronger alignment with business strategy; it allows development of a common set of metrics or scorecards to measure and report rates of quality and delivery; it helps to streamline processes; and it gives the company a cost advantage in purchasing training from vendors and consultants because of the number of trainees who will be involved. Also, a centralized training function helps companies better integrate programs for developing leaders and managing talent with training and learning during times of change.

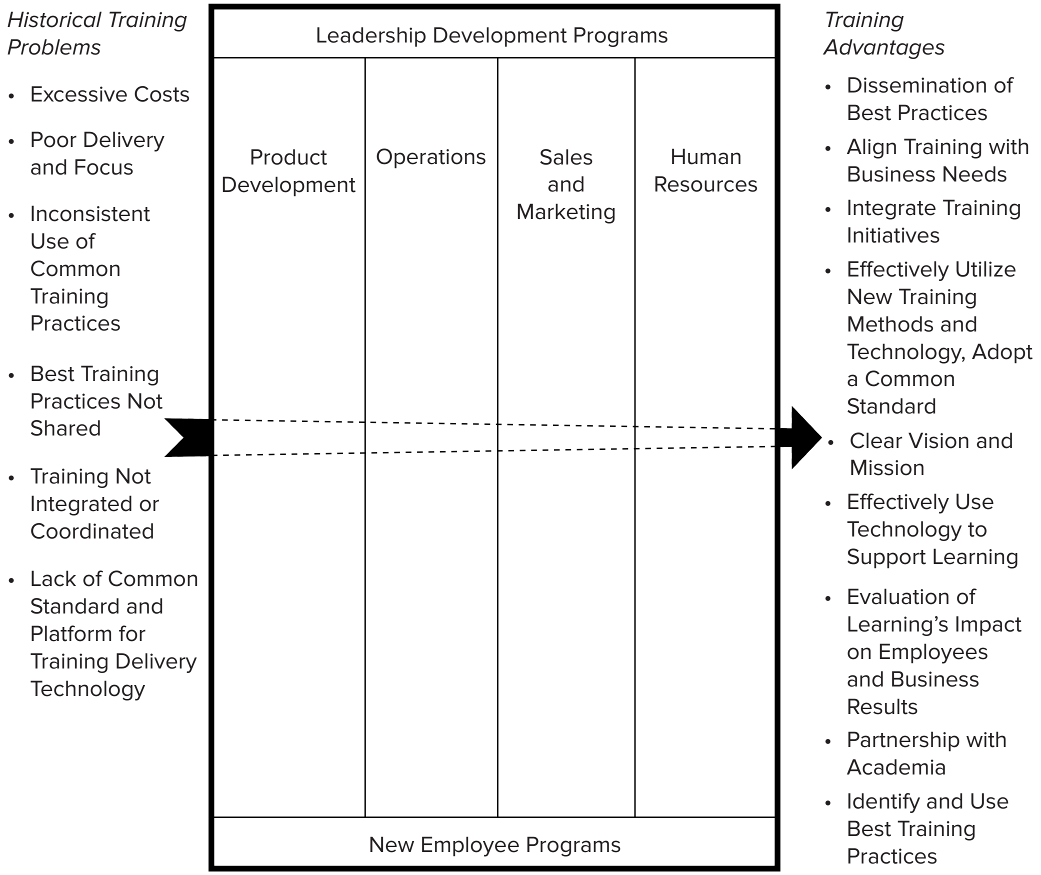
FMC Technologies and Technip, an oil company and a gas company, merged forming TechnipFMC.[63] Leaders from the two companies realized they were going to have to merge two very different learning strategy styles together. One company's L&D model was fully centralized but relied primarily on required training and the other was decentralized but access to learning solutions was inconsistent. The learning catalogues between the two companies offered more than 20,000 courses, many of which were similar to each other. The goal was to create a unified program in which employees had ownership over which courses they took, and the courses were easy to access while at home, traveling, or away from the office. TechnipFMC's learning team reviewed all of the courses and developed a single learning catalogue. The result was a learning platform that serves roughly 37,000 employees globally in 48 countries. In just six months, 93 percent of employees had accessed the learning platform. At SAP, the funding for learning is centralized for strategic programs that are important across business units.[64] Separate learning groups at SAP are united under one brand, logo, learning technology, and instructional design philosophy. However, the learning function continues to be responsive to the learning and development needs of different business areas and types of employees. At STIHL, a producer of outdoor power equipment such as chain saws, blowers, and trimmers, learning has to be tailored to three different stakeholders: employees, wholesale distributors, and retailers.[65] It provides online technical training through ToolingU and supports its dealers' businesses and training needs through iCademy, a distance-learning program. The Professional Instruction Program is designed for professional landscaping, tree services, and public utilities to help commercial crews best use their equipment and avoid accidents.

The Corporate University (Corporate Training Universities)

To gain the advantages of centralized training, many companies use a corporate university as shown in **Figure 2.5**. The **corporate university** includes employees, managers, and stakeholders outside the company, including community colleges, universities, high schools, and grade schools. Corporate universities can provide significant advantages for a company's learning efforts by helping to overcome many of the historical problems that have plagued training departments (see the left side of **Figure 2.5**). A corporate university can help make learning more strategic by providing a clear mission and vision for learning and ensuring that it is aligned with business needs. For companies with a strong business culture and values, it can help ensure that those qualities are emphasized in the learning curriculum. Also, the corporate university can control costs and maximize the benefits of learning. This occurs through providing consistent training activities, disseminating best learning practices throughout the company, effectively using technology to support learning, evaluating learning's impact on employees and business results, and establishing partnerships with academia and other company stakeholders (community) to develop custom training and degree programs.[66] In the discussion that follows, we consider how several different companies have used their corporate universities to contribute to the business.[67]

At Underwriters Laboratories, a product testing and certification company, Underwriters Laboratories University (ULU) develops training programs, provides organizational development expertise to develop talent and promote customer service, and offers Lean Six Sigma expertise to support continuous improvement. The university also helps diagnose problems and propose solutions. For example, ULU has partnered with Yale University to create an action learning program that requires managers to identify a business idea and plans to introduce it. The United Laboratories Asia unit requested the ULU's help in improving the delivery of

FIGURE 2.5 **The Corporate University Model**



learning in a way that would appeal to millennial employees. The university partnered with the Asian business leaders to enhance learning and transfer using social media technology. After taking training classes, participants were encouraged to work in groups to create a video showing how they applied the skills they learned in their jobs. The videos were sent to ULU, which posted them on a SharePoint site where they were viewed and voted on based on their content and application. The favorite video winners received awards.

Jiffy Lube, a company in the automobile lubrication industry, created Jiffy Lube University to provide e-learning, instructor-led training, and virtual instructor-led training to 20,000 Jiffy Lube service center technicians. Training is evaluated based on key performance indicators including customer satisfaction, percentage of training completed, and employee retention. Jiffy Lube University also provides service center employees with a development roadmap that gives them the opportunity to take responsibility for their personal development depending on their career goals. For example, to help further their careers, Jiffy Lube University offers service center employees courses that they can take to earn up to 25 hours of college credit at trade schools and colleges and universities.

KPMG spent $450 million on a learning and development facility in Orlando, Florida. The 55-acre facility, known as the KPMG Lakehouse, includes 800 hotel rooms, learning and innovation spaces, and a large area to hoist town hall meetings. The Lakehouse has multiple dining areas, a separate social venue, and fitness and recreational amenities to support the firm's focus on health and well-being. Each of KPMG's employees and partners spend a week at the facility engaged in classroom instruction, digital learning, and networking. The Lakehouse is the place where new employees and interns learn about KPMG's values, history, and traditions. Also, KMPG clients have access. They can send their employees for training or to work on their business problems with KPMG experts. KPMG believes that despite the firm's increased development of digital learning solutions, a physical space such as the Lakehouse is necessary to provide employees with a place to practice skills and behavior and gain insights from their peers and experts. This helps ensure that newly acquired skills and behaviors are used back on the job in interactions with their peers and clients. KPMG leaders actively facilitate or teach in many of the learning programs. The monetary investment in the Lakehouse and employees and leaders involvement reinforces the importance of continuous learning as part of KPMGs work culture and business strategy. It helps KPMG attract and retain talent. The pandemic forced the Lakehouse to temporarily close, but it is expected to resume operations as soon as possible.

Are corporate universities effective? Corporate University Xchange surveyed corporate universities at 170 different companies.[68] The top five organizational goals of corporate universities were to improve customer service and retention, improve productivity, reduce costs, retain talented employees, and increase revenue. The survey found that measuring business impact was a high priority; 70 percent of the companies measured business impact through product and service quality and customer service, and more than 50 percent measured reductions in operating costs and increased revenues.

For example, the Ritz-Carlton Hotel Company manages luxury hotels worldwide.[69] The Ritz-Carlton hotels and resorts are renowned for indulgent luxury. Beautiful surroundings and legendary award-winning service are provided to every guest. The Ritz-Carlton Leadership Center is designed to support the growth and expansion of the company's products and services. The Leadership Center includes the School of Performance Excellence, which houses all the training and development for hourly employees; the School of Leadership and Business Excellence, which trains leaders; and the School of Service Excellence, which helps ensure high customer service. Programs at the School of Service Excellence are offered to other companies, which has resulted in yearly revenues for Ritz-Carlton of more than $1 million. These revenues help offset the costs of training and development for employees. For example, a new customized training certification system for housekeeping staff uses CD-ROM and web-based training. The training is linked to the results of room inspections that highlight defects for the day, week, and year. The housekeeper can then identify the correct processes that are needed to remedy the defects. This just-in-time training has helped increase customer satisfaction scores at Ritz-Carlton. One hotel increased its satisfaction score with cleanliness from 82 to 92 percent in six months.

Creating a Corporate University

Creating a corporate university from scratch involves several steps.[70] First, senior managers and business managers form a governing body with the responsibility of developing a vision for the university. (This group answers questions such as, "What are the university's policies, systems, and procedures?" and "What are the key functional areas for which training courses will be developed?") Second, this vision is fleshed out, and the vision statement is linked to the business strategy. For example, Ingersoll Rand has a business goal of obtaining 38 percent of its revenue from new product innovation.[71] As a result, programs and courses offered through Ingersoll Rand University discuss how to get close to the customer, innovation, and strategic marketing. The programs are designed for teams working on real business issues. Subject-matter experts and managers teach these programs, which are scheduled based on key product launch dates. The third step in creating a corporate university involves deciding how to fund the university. The university can be funded by charging fees to business units and/or by monies allocated directly from the corporate budget. Fourth, the company determines the degree to which all training will be centralized. Many universities centralize the development of a learning philosophy, core curriculum design, and policies and procedures related to registration, administration, measurement, marketing, and distance learning. Local and regional on-site delivery and specialized business-unit curriculum are developed by business units. Fifth, it is important to identify the needs of university "customers," including employees, managers, suppliers, and external customers. Sixth, products and services are developed. For example, the Bank of Montreal uses a service team that includes a client-relationship manager, a subject-matter expert, and a learning manager. The client-relationship manager works with the business units to identify their needs. The subject-matter expert identifies the skill requirements for meeting those needs. The learning manager recommends the best mix of learning, including classroom training and training based on, say, the web. In the seventh step in creating a corporate university, the company chooses learning partners, including suppliers, consultants, colleges, and companies specializing in education. Eighth, the company develops a strategy for using technology to train more employees and to do so more frequently and more cost-effectively than instructor-led training. Ninth, learning that occurs as a result of a corporate university is linked to performance improvement. This involves identifying how performance improvement will be measured (tests, sales data, etc.).

Business-Embedded Learning Function

Most companies are ensuring that their learning function is centralized to some extent so that they can better control their training costs and ensure that training is aligned with the business strategy, but at the same time respond quickly to client needs and provide high-quality services.[72] A **business-embedded (BE) learning function** is characterized by five competencies: strategic direction, product design, structural versatility, product delivery, and accountability for results. Strategic direction includes a clearly described goal and direction to the department, as well as a customer focus that includes customizing training to meet customer needs and continuously improving programs. A BE learning function not only views trainees as customers, but also views managers and senior-level managers as customers who make decisions to send employees to training and allocate money for training, respectively. **Table 2.8** shows the features of a learning function that is business-embedded. BE means the learning function is customer-focused. A BE learning function takes more responsibility for learning and evaluating training effectiveness, provides customized training solutions based on customer needs, and determines when and how to deliver training based on customer needs.

MasTec Utility Services decentralized its learning efforts by adding training and development resources to each of its regions.[73] This resulted in increases in training staff, dollars dedicated for training and development, and the construction of new training centers in Texas, Florida, and North Carolina. Embedding training and development in each of the regions will allow them to customize training programs based on their unique projects, customers, laws, and even weather conditions.

TABLE 2.8 Features of a BE Learning Function

Strategic Direction
Broadly disseminates a clearly articulated mission
Recognizes that its customer base is segmented
Provides customized solutions to its clients' needs
Understands product life cycles
Organizes its offerings by competencies
Competes for internal customers
Product Design
Uses benchmarking and other innovative design
Implements strategies to develop products quickly
Involves suppliers strategically
Structural Versatility
Employs professionals who serve as product and classroom instructors, managers, and internal consultants
Uses resources from many areas
Involves line managers in determining the direction of the department's offerings and content
Product Delivery
Offers a menu of learning options
Delivers training at the work site
Accountability for Results
Believes that individual employees must take responsibility for their personal growth
Provides follow-up on the job to ensure that learning takes place
Considers the manager the key player in supporting learning
Evaluates the strategic effects of training and its bottom-line results
Guarantees that training will improve performance

Sources: M, Bolch, "Training Gets Down to Business," *training,* March/April 2010, pp. 31–33; M. Weinstein, "Look Ahead: Long-Range Learning Plans," *training,* November/December 2010, pp. 38–41; S. S. McIntosh, "Envisioning Virtual Training Organization," *Training and Development,* May 1995, p. 47.

The most noticeable feature of a BE function is its structure.[74] In BE training functions, all persons who are involved in the training process communicate and share resources. Trainers—who are responsible for developing training materials, delivering instruction, and supporting trainees—work together to ensure that learning occurs. For example, access to project managers and subject-matter experts can be provided by developers to instructors who usually do not have contact with these groups. The number of trainers in BE training functions varies according to the demand for products and services. The trainers not only have specialized competencies (e.g., instructional design) but can also serve as internal consultants and provide a wide range of services (e.g., needs assessment, content improvement, customization of programs, and results measurement).

Current Practice: The BE Model with Centralized Training

Because many companies are recognizing training's critical role in contributing to the business strategy, there is an increasing trend for the training function, especially in companies that have separate business units, to be organized by a blend of the BE model with centralized training that often includes a corporate university. This approach allows the company to gain the benefits of centralized training but at the same time ensure that training can provide programs, content, and delivery methods that meet the needs of specific businesses.

Vi manages 10 retirement communities across the United States. Vi centralizes the development of its learning strategy but decentralizes learning delivery.[75] During development of Vi's annual business plan and budgeting process, training and development objectives are proposed by the company's learning council and approved by the executive management team. Vi's learning team partners with company leaders to help design and deliver classroom and virtual training. Each of Vi's locations has a training professional who delivers and helps support the execution of training. McKinsey & Co., the management consulting firm headquartered in New York, created centers of excellence (CoE) in its learning function.[76] The CoEs focus on design and development, digitizing learning, and content delivery. Each CoE includes teams that work with internal business advisers and external experts. The CoEs have worked on several projects, including developing a catalog of short, digital videos and minicourses that McKinsey's consultants can access using a mobile device. The minicourses can be automatically assigned to consultants when they are given a new client or project. Members of the learning and development team at McKinsey are constantly trying to reinforce the relationship between the business and learning teams by having frequent conversations with practice leaders and clients about their needs. The short videos and minicourses were developed based on these conversations, which revealed that consultants needed to quickly and continuously update their skills to better meet clients demands.

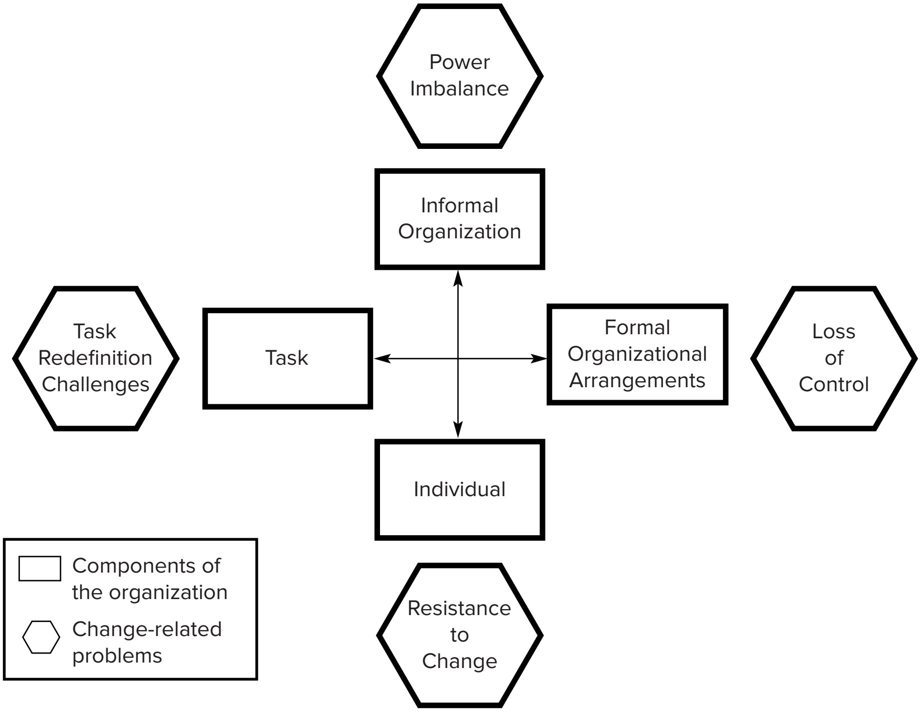
Learning, Training, and Development from a Change Model Perspective

As was discussed in **Chapter One**, change involves the adoption of a new behavior or idea by a company. There are many reasons why companies are forced to change, including the introduction of new technology, the need to take better advantage of employee skills and capitalize on a diverse workforce, or the desire to enter global markets. For training and development programs and learning initiatives to contribute to the business strategy, they must be successfully implemented, accepted, and used by customers (including managers, executives, and employees).

Four conditions are necessary for change to occur: (1) Employees must understand the reasons for change and agree with those reasons; (2) employees must have the skills needed to implement the change; (3) employees must see that managers and other employees in powerful positions support the change; and (4) organizational structures, such as compensation and performance management systems, must support the change.[77] For managers and employees, change is not easy. Even when employees know that a practice or program could be better, they have learned to adapt to its inadequacies. Therefore, resistance to new training and development practices is likely. Prior to implementing a new training or development practice, trainers should consider how they can increase the likelihood of its acceptance.

Figure 2.6 provides a model of change. The process of change is based on the interaction among four components of the organization: task, individual (employee), formal organizational arrangements (structures, processes, and systems), and informal organization (communication patterns, values, and norms).[78] As shown in the figure, different types of change-related problems occur depending on the organizational component that is influenced by the change. For example, introducing new technology for training into a company

FIGURE 2.6 **A Change Model**



Sources: David A. Nadler and Michael L. Tushman, "A Congruence Model for Diagnosing Organizational Behavior," in *Organizational Psychology: A Book of Readings*, eds. D. Rabin and J. McIntyre (Englewood Cliffs, NJ: Prentice Hall, 1979), as reprinted in David A. Nadler, "Concepts for the Management of Organizational Change," in *Readings in the Management of Innovation*, 2nd ed., eds. M. L. Tushman and N. Moore (Cambridge, MA: Ballinger Publishing Co., 1988), p. 722.

(such as multimedia training using the Internet) might cause changes in the organization's power structure. With the new technology, managers may have less control over access to training programs than they had with traditional methods of training. The result is tension related to the power imbalance created by the new system. If these issues are not dealt with, managers will not accept the new technology or provide support for transfer of training.

The four change-related problems that need to be addressed before implementation of any new training practice are resistance to change, loss of control, power imbalance, and task redefinition. **Resistance to change** refers to managers' and employees' unwillingness to change. Managers and employees may be anxious about change, feel that they will be unable to cope, value the current training practice, or not understand the value of the new practice. **Control** relates change to managers' and employees' ability to obtain and distribute valuable resources such as data, information, or money. Changes can cause managers and employees to have less control over resources. Change can also give managers and employees control over processes in which they have not previously been involved (e.g., choosing which training programs to attend). **Power** refers to the ability to influence others. Managers may lose the ability to influence employees as employees gain access to databases and other information, thus getting more autonomy to deliver products and services. Employees may be held accountable for learning in self-directed training. Web-based training methods, such as **task redefinition**, create changes in managers' and employees' roles and job responsibilities. Employees may be asked not only to participate in training, but also to consider how to improve its quality. Managers may be asked to become facilitators and coaches.

Senior managers often make three important mistakes in trying to implement change, which can result in failure to produce the desired results.[79] These include telling or issuing communications for employees to "buy in" to the changes; believing that they know enough about the company to understand the impact of change on individuals and how the change should be managed to achieve the desired results; and ignoring or not giving enough consideration to barriers that may slow down or cause change initiatives to fail. Training departments are often in the best position to help senior company leaders implement change, especially if they play a strategic role in the company, because they interact and have the opportunity to hear from business leaders and employees about problems, challenges, and needs they are facing. Consider how Mendix, a technology company with 300 employees that specializes in helping other companies develop web and mobile applications, introduced a new learning system.[80] Rapid growth in its business created the need to add and train new sales representatives, as well as reduce the time existing sales representatives took to make sales and increase the number of sales opportunities they generated. To do so, Mendix developed a new learning system that would enable it to create and distribute self-paced modules for its sales managers and sales representatives. Some members of the sales team, many of them more experienced employees, resisted the new learning system because they believed it would take time away from their primary responsibilities of identifying new customers and making sales to existing clients. Mendix took a four-step approach to help the sales team accept the new learning system. First, it introduced the learning system to top sales performers. The training helped enhance these employees' sales. Next, it introduced the new learning system at the company's annual sales meeting and shared the accomplishments of the sales force that had already completed the program. Second, it rolled out the learning platform to the rest of the sales force. Salespersons who had previously completed training using the new system ("champions") were asked to help endorse the value of the new system and assist others in using it. Third, to help reduce resistance to the new system, the CEO made it mandatory for all sales representatives to complete training modules using the new system, publicly endorsed it, and changed the compensation model to provide a quarterly bonus for sales representatives who completed learning modules using the new system. Managers created friendly competition among the sales representatives by highlighting the top performers at different levels and company locations. Fourth, the company publicly recognized the first sales representatives to complete the learning modules. Mendix's four-step approach to overcoming resistance to change was successful. Eight weeks after the new learning system was introduced to the entire sales force, 87 percent had completed the required training modules. The results of a survey of the value and use of the system showed that even more experienced sales team members reported that the system had helped them learn new skills that enabled them to generate new business relationships and close sales.

Table 2.9 shows seven key steps that training professionals can take to help senior managers effectively manage a change initiative.

TABLE 2.9 Steps in a Change Process

1. **Clarify the request for change.** Is the stated reason for change an important issue? How does the change fit into the company's business strategy? Why are you making the change? How many people does this affect, and how does it affect them? What are the outcomes of the change?
2. **Make the vision clear.** Identify the reason for the change, what will be achieved, and how the change will be achieved.
3. **Design the solution.** What is the best mix of performance measures and feedback, support tools, learning plans, formal training, and job processes? Review the potential risks and benefits of different approaches.
4. **Communicate and market for buy-in.** Connect with other groups that will be involved, including communications, finance, and operations, to consider the impact of the change and develop an

internal marketing plan. Employees need to know what is occurring. Use briefings, newsletters, discussion boards, websites, and informational meetings. Senior managers need to be visible and involved in communicating about the change.

5. **Choose and announce the action as soon as possible.** Employees affected by the change must hear about it as soon as possible. Employees need to know why and how the final action was selected, how the process has progressed, and what is going to happen in the next days and months. Communicating logic and reasoning can help overcome resistance to change. Provide short previews to employees so they know what changes are coming.
6. **Execute and create short-term wins.** Success requires management attention and the desire to do it right. Managers and change leaders must model new behavior and become enthusiastic supporters for the process. Leaders should involve employees and provide them with the necessary training and resources. If a pilot test or beta program is used, employees should be kept informed on its progress and asked for their opinions. Learning should occur from any mistakes.
7. **Follow up, reevaluate, and modify.** Be flexible and make changes if they are needed. Share information about mistakes or issues, and work with the employees affected to fix them.

Sources: Based on C. McAllaster, "Leading Change by Effectively Utilizing Leverage Points Within an Organization," *Organizational Dynamics* 33 (2004), p. 318; L. Freifeld, "Changes with Penguins," *training,* June 2008, pp. 24–28; N. Miller, "Brave New World," *T+D,* June 2010, pp. 54–58.

Marketing Training and Creating a Brand

Despite the increased recognition of the importance of training and learning in the achievement business goals, many managers and employees may not recognize the value of training. Internal marketing involves making employees and managers excited about training and learning. Internal marketing is especially important for trainers who act as internal consultants to business units. For internal consultants to survive, they must generate fees for their services. Some, if not all, of their operating expenses come from fees paid for their services. Marketing is also important for the successful adoption of new training programs in terms of helping to overcome resistance to change and misconceptions about the value of training. Here are some successful internal marketing tactics:[81]

- Involve the target audience in developing the training or learning effort.
- Demonstrate how a training and development program can be used to solve specific business needs.
- Showcase an example of how training has been used within the company to solve specific business needs.
- Identify a "champion" (e.g., a top-level manager) who actively supports training.
- Listen and act on feedback received from clients, managers, and employees.
- Advertise on e-mail, on company websites, and in employee break areas.
- Designate someone in the training function as an account representative who will interact between the training designer or team and the business unit, which is the customer.
- Determine what financial numbers—such as return on assets, cash flow from operations, or net profit or loss—top-level executives are concerned with and show how training and development will help improve those numbers.
- Speak in terms that employees and managers understand. Don't use jargon.
- Win a local or national training industry award or recognition.

- Publicize learner or manager success stories or feature those who have earned certifications or degrees using newsletters or websites.
- Send workforce segments (e.g., managers, employees, business units) customized communications emphasizing the value of training emphasizing “what’s in it for me”.

It is also important to develop and communicate the training brand. A **brand** includes the look and feeling of the training function that is used to create expectations for its customers.[82] The brand is used to acquire and retain customers. To build a training brand, follow the suggestions shown in **Table 2.10**. The training function also needs to develop its own strategy and communicate it to its customers.[83] The strategy should include what products and services it plans to offer, how training requests will be handled and by whom, how it will demonstrate partnerships with other departments and business units in the company, and the service level that it intends to provide to customers. Service before, during, and after training, development, or other learning initiatives needs to be considered. The training function strategy should be aligned with and contribute to the business strategy.

TABLE 2.10 How to Build a Training Brand

- Ask current “customers” of training, including managers who purchase or ask for training and employees who participate in training, what their perceptions are of the brand. For example, what emotions describe how they feel about the training brand? What words summarize their feelings? What conclusions have they made about doing business with you? Answers to these questions provide information regarding the strength of the training brand and whether it is being perceived positively or as intended.
- Define how you want to be perceived by current and future customers.
- Identify factors that influence your customers’ perceptions of the training function.
- Review each of the factors to determine if they are supporting and communicating the brand to your customers in the way that you intended.
- Make changes so that each factor is supporting the brand.
- Get customers’ feedback at each step of this process (define the brand, identify factors, suggest changes, etc.).
- When interacting with customers, create an experience that supports and identifies the brand.

Sources: Based on M. Smith and M. Chilcote, “Take the Mystery Out of Marketing Your Learning Function,” *training,* March/April 2018, pp. 14–15; A. Hand, “How to Enhance Your Training Brand,” *T+D,* February 2011, pp. 76–77.

For example, the learning and development team at Lincoln Financial Group, an investment management and insurance company, developed a marketing plan to promote its new program, Leadership in Action.[84] The program was developed to give employees who work at six different locations easy access to training and career management. It included webinars, videos, articles, and other online content that employees could access on demand. To market the program before it was launched, the learning and development team promoted the program in company newsletters, intranet announcements, and e-mails sent to employees. Once the program started, the learning and development team sent reminder notes and promotions to advertise the addition of new content.

Training functions are beginning to become profit centers by selling training courses or seats in training courses to other companies.[85] Companies sell training services for a number of reasons. Some businesses are so good at a particular aspect of their operations that other companies are asking for their expertise. Other companies aim training at their own customers or dealers. In some cases, the training department sells unused seats in training programs or e-learning courses. For example, Walt Disney Company sells training on customer service and organizational creativity at the Disney Institute in Florida. The institute gives employees from other companies the opportunity to understand how Disney developed its business strengths, including leadership development, service, customer loyalty, and team building. Zappos Insights is a department within Zappos that was created to share the Zappos culture with other companies.[86] Zappos is known for its WOW customer service philosophy (see the end-of-chapter case in **Chapter One**). Zappos Insights provides programs about building a culture (3-Day Culture Camp), its WOW service philosophy (School of WOW), the power of a coaching-based culture (Coaching Event), how the human resources function protects the culture and how its programs support it (People Academy), and custom programs. The cost to attend these programs ranges from $2,000 to $6,000 for each attendee.

Outsourcing Training

Outsourcing refers to the use of an outside company (an external services firm) that takes complete responsibility and control of some training or development activities or that takes over all or most of a company's training, including administration, design, delivery, and development.[87] **Business process outsourcing** refers to the outsourcing of any business process, such as HRM, production, or training. Survey results suggest that slightly more than half of all companies outsource instruction.[88] Less than half outsource some or all of the responsibility for developing customized training content and courses. Why would companies outsource training? Some of the reasons are cost savings; time savings that allow a company to focus on business strategy; improvements in compliance and accuracy in training mandated to comply with federal, state, or local rules (e.g., safety training); the lack of capability within the company to meet learning demands; and the desire to access best training practices. Some companies choose a comprehensive approach, outsourcing all training activities. ManTech International, a defense company specializing in cybersecurity and information technology, decided to outsource training.[89] ManTech partnered with Skillsoft to offer training that is relevant for the wide variety of jobs and types of work its employees engage in. Employees find the training attractive because it allows them to receive training in skill sets they are interested in such as machine learning and artificial intelligence. From the company's perspective, the availability of training is valuable because it supports the company's digital transformation and gives employees the opportunity to take ownership for developing the skills they need to advance their careers.

Although some companies are beginning to outsource and the trend appears to be growing, most companies outsource only smaller projects, not the complete training and development function. Two reasons that companies do not outsource their training are (1) the inability of outsourcing providers to meet company needs and (2) companies' desire to maintain control over all aspects of training and development, especially delivery and learning content. **Table 2.11** shows some of the questions that should be considered when a company is deciding whether or not to outsource. Any decision to outsource training is complex. Training functions that do not add any value to the company are likely candidates for outsourcing (see **Table 2.11**, Questions 1–4 and 9). Many companies have training functions that add value to the business but still may not be capable of meeting all training needs. For example, a company that has a strong skilled training function, values training, and views it as important to the business strategy probably doesn't need to outsource its entire training function. However, that company may turn to outsourcing providers for special training needs beyond staff capabilities or for certain training content that changes rapidly. For example, at C&A Industries, the training and development staff build all leadership and technical skills training courses.[90] But they outsource courses and programs for some interpersonal skills. Research suggests that company satisfaction with the outsourcing of training and development depends on company–supplier trust (e.g., managers of both the company and the outsource provider are loyal to each other and look out for each other's interests) and the specificity of the contract (e.g., whether the contract clearly outlines responsibilities).[91]

TABLE 2.11 Questions to Ask When Considering Outsourcing

1. What are the capabilities of your in-house training function? Does the staff know enough that you can grow the training skills you need, or do you need to hire training skills from the outside?
2. Can your in-house training function take on additional training responsibilities?
3. Is training key to your company's strategy? Is it proprietary?
4. Does your company value its training organization?
5. Does the training content change rapidly?
6. Are outsourced trainers viewed as experts, or are they viewed with cynicism?
7. Do you understand the strengths and weaknesses of your current training programs?
8. Do you want to outsource the entire training function?
9. Are executives trying to minimize training's impact on your company? Does your company accept responsibility for building skills and talent?
10. Is a combination of internal and external training the best solution?

Sources: Based on G. Johnson, "To Outsource or Not to Outsource . . . That Is the Question," *training,* August 2004, pp. 26–29; K. Tyler, "Carve Out Training?" *HR Magazine,* February 2004, pp. 52–57; N. Srivastava, "Want to Stay Competitive and Cut Costs? Consider Outsourced Training," *Workforce,* January 2015, p. 47.

Summary

For training to help a company gain a competitive advantage, it must help the company reach business goals and objectives. This chapter emphasized how changes in work roles, organizational factors, and the role of training influence the amount and type of training, as well as the organization of the training functions. The process of strategic training and development was discussed. The chapter explained how different strategies (such as concentration, internal growth, external growth, and disinvestment) influence the goals of the business and create different training needs. The chapter included a discussion of different models of the training function. Because training makes a greater contribution to the achievement of business strategies and goals, the business-embedded and corporate university models will become more prevalent. Because learning, training, and development involve change, the chapter discussed the conditions necessary for managers and employees to accept and benefit from new programs. The chapter concluded with information about marketing and outsourcing the training function.

Key Terms

business strategy *62*
learning organization *64*
mission *68*
vision *68*
values *68*
goals *68*
SWOT analysis *69*
external analysis *69*
internal analysis *69*
strategic choice *69*
strategic training and development initiatives *70*
metrics *75*
balanced scorecard *75*
chief learning officer (CLO) *81*
knowledge officer *81*
human resource management (HRM) practices *84*
staffing strategy *84*
uniqueness *85*
strategic value *85*

human resource planning *86*

concentration strategy *86*

internal growth strategy *88*

external growth strategy *88*

disinvestment strategy *88*

centralized training *89*

corporate university *89*

business-embedded (BE) learning function *92*

resistance to change *95*

control *95*

power *95*

task redefinition *95*

brand *98*

outsourcing *99*

business process outsourcing *99*

Discussion Questions

1. How would you expect the training activities of a company that is dominant in its product market to differ from those of a company that emphasizes research and development?
2. What do you think is the most important organizational characteristic that influences training? Why?
3. Why could the business-embedded model be considered the best way to organize the training function?
4. Schering-Plough HealthCare Products Inc. expanded its product line by developing pocket-size sticks and sprays of Coppertone sunscreen, previously only available as lotions packaged in squeeze bottles. The company placed a strategic emphasis on developing markets for this product. The company knew from market research studies that its Coppertone customers were already using the product in its original squeeze container at the beach. Due to increased awareness of the dangers of excessive skin exposure, consumers who had not previously used sunscreen except when at the beach were looking for a daily sunscreen product. Company managers reasoned that their market could be expanded significantly if the product were repackaged to fit conveniently in consumers' pockets, purses, and gym bags. Identify the business strategy. What training needs result from this strategy? What are the training implications of this decision for (1) manufacturing and (2) the sales force?
5. Which strategic training and development initiatives do you think all companies should support regardless of economic conditions? Why?
6. Which of the strategic training and development initiatives do you believe is most important for a small business? Explain your choice.
7. How can a training function support a business strategy?
8. How do the strategic value of jobs and their uniqueness influence how training and learning resources are invested?
9. What is human capital? How is human capital influencing the changing role of training from skill and knowledge acquisition to the creation and sharing of knowledge?
10. How could SWOT analysis be used to align training activities with business strategies and goals?
11. What are the training implications of the increased use of teams to manufacture products or provide services?
12. How would you design a corporate university? Explain each step you would take.
13. What are the advantages and disadvantages of a centralized training function?
14. How does a rapidly changing business environment influence training outsourcing? Explain.
15. What is a training "brand"? Why is it important? How does it relate to marketing the training or learning function in an organization?
16. What does "change" have to do with training and learning? What four change-related problems need to be addressed for a new training program to be accepted by employees?

Application Assignments

1. Learn about McDonald's. Under "About Us," review "Our History" and "Values in Action." Also, review the following links: https://corporate.mcdonalds.com/corpmcd/scale-for-good/investment-in-people.html, https://corporate.mcdonalds.com/corpmcd/scale-for-good/youth-opportunity.html, https://corporate.mcdonalds.com/corpmcd/about-us/diversity-and-inclusion.html, https://corporate.mcdonalds.com/corpmcd/about-us/our-values. html, and https://ceoworld.biz/2019/07/16/things-to-know-about-the-famous-hamburger-university. Watch the video at www.youtube.com/watch?v=sICEmBpAPq0&t=3s. Answer these questions:
    a. What kinds of training and education programs are evident at McDonald's?
    b. Consider human capital, physical capital, and financial capital. Does McDonald's investment in training and education contribute to the business? How? Do you think their investment is strategic? Why or why not?
    c. Which stakeholders does McDonalds' investment focus on? Explain why.
    d. Does McDonald's training and education support the company values? If so, identify the values and explain how they are supported by training and education.
2. Find a company's annual report by using the Internet or visiting a library. Using the annual report, do the following:
    a. Identify the company's mission, values, and goals.
    b. Find any information provided in the report regarding the company's training practices and how they relate to its goals and strategies. Be prepared to give a brief presentation of your research to the class.
3. Go to www.orkin.com, the website for Orkin, a company committed to providing the world's best pest and termite control. Click on "Careers" at the bottom of the page. Investigate the company by clicking on "Why Work for Orkin," "Benefits," and "Community." Click on "Orkin Training." Review The Rollins Learning Center at www.orkin.com/about/rollins-learning-center. What type of training does Orkin offer employees? Is its training strategic? Why or why not? How does Orkin use training to contribute to the company's competitive advantage?
4. Deloitte invested millions of dollars in building Deloitte University. Watch the YouTube video that highlights Deloitte University at www.youtube.com/watch?v=VnEGnK0lGEE. How does Deloitte University and the activities that happen there help to strengthen Deloitte's business? To learn more about Deloitte's business, go to www2.deloitte.com/us/en.html.
5. Go to the website for Raytheon Professional Services, www.raytheon.com/ourcompany/rps-tailored-corporate-training-solutions, a training outsource provider. What services does Raytheon Professional Services provide? What are some of the potential advantages and disadvantages of outsourcing training to Raytheon Professional Services?
6. Watch the YouTube video about McCarthy Building Systems, a member of *Training Magazine*'s Top Ten Hall of Fame, at www.youtube.com/watch?v=m0AEJQKRQuo. What is McCarthy's strategic focus? Identify McCarthy's training and development initiatives and activities and the metrics it uses to show the value of training.

7. Go to www.youtube.com/watch?v=HwmOvBBmgMY. Watch the video highlighting KPMG's Lakehouse, its learning, development, and innovation center. What benefits does KPMG hope to gain from its investment in Lakehouse? What message does this investment send to current and prospective KPMG employees?
8. Go to https://learning.linkedin.com, the website for LinkedIn Learning. LinkedIn Learning provides online learning to employees sponsored by their company or individuals who pay for the services. Review the website and watch the video. What are the advantages and potential disadvantages of outsourcing learning to LinkedIn Learning? How can the use of LinkedIn Learning help create a learning organization?

Case: *Learning at iCIMS*

iCIMS provides recruitment technology and software that help its clients engage, interview, track, and manage offers made to job applicants. The company's growth strategy focuses on increasing revenues, expanding the business, and new product development. The company's diverse and inclusive culture is based in eight competencies: Accountability, Adaptability, Customer Commitment, Drive, Empathy, Kaizen (continuous improvement), Passion, and Transparency. The Association for Talent Development recognized iCIMS as a 2020 Best Award Winner for its training and development efforts. Since 2016, iCIMS talent development team has grown from one ten members. To facilitate learning the company provides internal courses as well as external content from LinkedIn Learning. LinkedIn Learning offers video courses taught by industry experts in software, creative, and business skills. It also provides training and certification programs which involve experts from inside and outside the company. To facilitate learning every department budget includes funds allocated specifically for training. Company goals include learning-related objectives. Members of the talent team are assigned to each business unit and meet with senior leaders to update them on the progress made toward reaching learning objectives. Every employee is required to complete thirty-two hours of training each year. One of all managers' performance goals (which are part of their performance evaluation) is related to the development of their employees. *What aspects of learning at iCIMS are strategic? What other information do you need to know to more completely evaluate whether learning is strategic or not?*

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Case 1: Learning in Practice

"Alexa, Tell Me About Learning at Amazon.com, Inc."

Amazon.com, Inc. is a technology company based in Seattle, Washington, that focuses on e-commerce, cloud computing, digital streaming, and artificial intelligence. The company strives to be Earth's most customer-centric company. Amazon is guided by four principles: customer obsession rather than competitor focus, passion for invention, commitment to operational excellence, and long-term thinking. You may know Amazon because you have shopped online for Amazon Prime, listened to music on Amazon Music, watched Amazon's original shows, used an Amazon device like Alexa, Echo, or a Fire Tablet, or purchased food or groceries at Amazon Go or Whole Foods. Amazon has about 1 million employees after hiring 250,000 workers at the end of 2020 due to increased e-commerce sales during the coronavirus pandemic. It is important to consider that in the last several years Amazon has received unflattering press such as claims it has a demanding and demeaning work culture and it did not do enough to protect the health and safety of its warehouse workers at the beginning of the pandemic. And some would argue that the growth of Amazon has meant the loss of traditional retailers and jobs across the United States. However, it is important to consider that Amazon has created thousands of jobs around the world and made considerable investment in training its employees and contribution to the education of elementary, secondary, and college students and adults in the United States and around the world.

Amazon has a number of programs for its employees including the Amazon Technical Academy, Machine Learning University, Associate2Tech, Amazon Apprenticeship, AWS Training, and Career Choice. The availability of these programs is based on a $700 million investment Amazon made to supporting training. The investment supports Amazon's goal of retraining one- third of the company's U.S.-based workers, including corporate executives and warehouse employees, on high-tech tasks by 2025. For example, Amazon's Career Choice tuition assistance program helps fulfillment center employees pursue certificates and degrees in high-demand fields. The company constructed dedicated classrooms at its large fulfillment centers to make learning more accessible to participants who may attend class before or after their work shifts, or on days off. Amazon believes Career Choice gives employees the skills they need to pursue their career path at Amazon or with other employers.

Amazon has also pledged to offer free skills training to 29 million people around the world. Much of the training involves mastering skills needed for cloud computing, which all organizations are increasingly moving toward. Amazon gave a $15 million donation to the nonprofit Code.org to support the development and launch of a new equity-minded Advanced Placement computer science programming curriculum. Code.org has the goal of expanding access to computer science in schools and increase participation of young women and students from other underrepresented groups. The dream is every student in every school has the opportunity to learn computer science as part of their primary and secondary school education. The new curriculum will teach students the same tools and concepts as an existing advanced placement high school computer science course, which earns students college credit. It will be developed inclusively to take into account the unique cultural perspectives, interests, and experiences of Black, Latino, Native American, and other minority students. Another program, Amazon Future Engineer, wants to motivate students to explore computer science through elementary school curriculum, middle and high school courses, and teachers to offer computer science courses. The awards made possible through the program include four-year $10,000 scholarships, guaranteed and paid Amazon internships to gain work experience, and $25,000 Amazon Future Engineer Teacher of the Year Awards. The program also creates partnerships with schools to bring new coding experiences to students.

Questions

1. Which forces or challenges influencing working and learning will Amazon's efforts help it overcome? Explain your choices and the rationale supporting it.
2. Does learning at Amazon support its business strategy? Explain your answer.
3. Provide Amazon with a recommendation regarding the metrics it should collect to show the success of its training and education efforts. List the training and education initiative and the metrics you recommend for it. Provide a rationale for the metrics you recommend.

Sources: Based on A. Picchi, "Amazon Says It Now Has More Than 1 Million Employees," *CBS News,* October 30, 2020, from www.cbsnews.com, accessed February 27, 2021; R. Mauer, "Scaling Up Skills," *HR Magazine,* Spring 2020, pp. 31–36; K. Lewis, "2030: Help Wanted," *HR Magazine,* Winter 2019, pp. 75–80; "Amazon Donates $15 Million to Code.org to Create New Equity-Minded Advanced Placement Computer Science Curriculum to Help High School Students in Underserved Communities Excel in Tech," Amazon, February 24, 2021, from https://press.aboutamazon.com, accessed February 27, 2021; "STEM Education," Amazon, from www.aboutamazon.com, accessed February 27, 2021; "About Us," CORE, from https://core.org, accessed February 27, 2021; "Amazon Upskilling 2025 Report," Amazon, December 2020, from https://d1.awsstatic.com/training-and-certification/resources/amazon-upskillingreport-2020.pdf, accessed February 27, 2021; "2019 Amazon Annual Report," Amazon, from https://ir.aboutamazon.com/annual-reports-proxies-and-shareholder-letters/default.aspx, accessed February 27, 2021.

PART TWO

Designing Training

Part Two focuses on how to systematically design effective training. **Chapter Three**, “Needs Assessment,” discusses the process used to determine whether training is necessary. Needs assessment includes analyzing the organization, people, and tasks involved. **Chapter Four**, “Learning and Transfer of Training,” discusses learning and transfer of training theories and their implications for creating an environment that will help trainees learn the desired outcomes from training and use them on their jobs. **Chapter Five**, “Program Design,” reviews practical issues in training program design, including developing training courses and programs, how to choose and prepare a training site, choosing a consultant or vendor, content curation, and how to create a work environment that maximizes learning and transfer of training, including manager and peer support. The role of knowledge management in transfer of training is also discussed. **Chapter Six**, “Training Evaluation,” provides an overview of how to evaluate training programs, including the types of outcomes that need to be measured and the types of evaluation designs available.

Part Two concludes with a case on how PepsiCo improved online learning.

CHAPTER THREE

Needs Assessment

Objectives

After reading this chapter, you should be able to

3-1 Discuss the role of organization analysis, person analysis, and task analysis in needs assessment.
3-2 Identify different methods used in needs assessment and identify the advantages and disadvantages of each method.
3-3 Discuss the concerns of upper- and mid-level managers and trainers in needs assessment.
3-4 Explain how personal characteristics, input, output, consequences, and feedback influence performance and learning.
3-5 Create conditions to ensure that employees are receptive to training.
3-6 Discuss the steps involved in conducting a task analysis.
3-7 Analyze task analysis data to determine the tasks for which people need to be trained.
3-8 Explain competency models and the process used to develop them.

Needs Assessment at NTT and Tata Consultancy Services

Needs assessment is a critical first step in designing new training courses and revising existing ones. Consider how needs assessment is used at NTT and Tata Consultancy Services. NTT is a global technology services company based in London, England. The training and development team at NTT uses a skills matrix to track current and future learning needs for key roles and functions. Employees are asked to rate their capabilities in specific skills on a scale of 1 to 5. Their managers verify the ratings and have the ability to change them after discussions with employees. The training and development team analyzes the data from the matrix by using data dashboards that enable the team and business leaders to compare employees' skill sets across different countries, regions, go-to-market areas, per line manager, and so forth. The team can also present the data through heat maps (a method to visualize data using color in two dimensions), which show areas of strong capability or skills gaps. The information has been very useful for managers, who can quickly see how their teams are currently performing and what their development needs may be in the future. The matrix has also proved a highly effective tool for communicating to leaders the importance of training programs and strategic learning initiatives. Each month the team and senior leaders from each business function review the matrix together and identify areas requiring focus or improvement. For example, one review indicated declining client satisfaction. As a result, the training and development team created training focused on call handling and call flows.

Tata Consultancy Services (TCS) provides information technology and business solutions. TCS wants to build employees' digital competencies. Providing digital solutions to customers are key to the company's continued success. In fact, digital revenues accounted for over 20 percent of TCS's revenue in 2018 and the percentage is expected to increase as customers' needs for digital solutions increase. TCS developed Talent 4.0, a program aimed at developing employees' digital skills. To identify the training best suited for each employee, TCS uses a tool known as T-Factor. The T-Factor measures the depth of employees' specific skill and their ability to apply the skills to certain work areas.

Sources: Based on S. Castellano, "Abandoning Tradition Yet Sticking With Structure," *T+D,* 2020 Best Practices, pp. 31–32; P. Harris, "How to Redefine Excellence," *T+D,* October 2019, pp. 59–61.

Introduction

As discussed in **Chapter One**, "Introduction to Employee Training and Development," effective training practices involve the use of a training design process. The design process begins with a needs assessment. Subsequent steps in the process include ensuring that employees have the motivation and basic skills necessary to learn, creating a positive learning environment, making sure that trainees use learned skills on the job, choosing the training method, and evaluating whether training has achieved the desired outcomes. As the company examples in the chapter opener highlight, before you choose a training method, it is important to determine what type of training is necessary and how it should be delivered. **Needs assessment** refers to the process used to determine whether training is necessary.

Needs assessment typically involves organizational analysis, person analysis, and task analysis.[1] An organizational analysis considers the context in which training will occur. That is, **organizational analysis** involves determining the appropriateness of training, given the company's business strategy, its resources available for training, and support by managers and peers for training activities. You are already familiar with one aspect of organizational analysis. **Chapter Two**, "Strategic Training," discussed the role of the company's business strategy in determining the frequency and type of training.

Person analysis helps identify who needs training. **Person analysis** involves: (1) determining whether performance deficiencies result from a lack of knowledge, skill, or ability (a training issue) or from a motivational or work-design problem; (2) identifying who needs training; and (3) determining employees' readiness for training. **Task analysis** identifies the important tasks and knowledge, skills, and behaviors that need to be emphasized in training for employees to complete their tasks.

Why Is Needs Assessment Necessary?

Needs assessment is important because a manager or other client asking for training—which focuses on closing skill gaps resulting from a lack of knowledge or skill—could really be asking for or need something else, such as a way to motivate employees, change their perspectives or attitudes, or redesign workflow.[2] If a manager requests training for a performance problem, what he or she is looking for is a solution to a problem that may (or may not) involve training. In conducting a needs assessment, your role is to determine if training is the appropriate solution.

Needs assessment is the first step in the instructional design process, and if it is not properly conducted, any one or more of the following situations may occur:

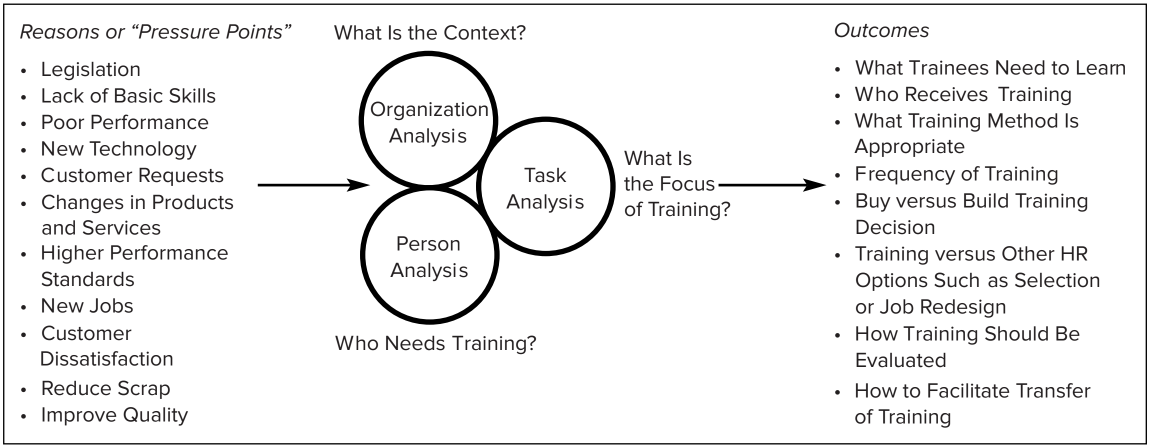
- Training may be incorrectly used as a solution to a performance problem (when the solution should deal with employee motivation, job design, or a better communication of performance expectations).
- Training programs may have the wrong content, objectives, or methods.

- Trainees may be sent to training programs for which they do not have the basic skills, prerequisite skills, or confidence needed to learn.
- Training may not deliver the expected learning, behavior change, or financial results that the company expects.
- Money may be spent on training programs that are unnecessary because they are unrelated to the company's business strategy.

Figure 3.1 shows the three types of analysis involved in needs assessment and the causes and outcomes that result. There are many different causes or "pressure points" that suggest that training is necessary. These pressure points include performance problems, new technology, internal or external customer requests for training, job redesign, new legislation, changes in customer preferences, the introduction of new products or services or changes to existing ones, and employees' lack of basic skills. For example, consider the pressure points that suggested training was necessary at Accenture and ArcBest.[3] Accenture's cybersecurity training program is based on issues identified by its cyber-intelligence research teams. These issues include trending and emerging security threats and data on security incidents experienced by employees. Simulation scenarios included in the training program require trainees to respond to these issues. ArcBest, a transportation company, introduced new technology to improve driver safety, such as forward-facing cameras, impact sensors, engine monitoring, GPS information, collision detection, incident review, and new electronic logging devices. The implementation and transition to this system involved training over 5,000 drivers and managers.

Note that these pressure points do not automatically mean that training is the correct solution. For example, consider a delivery truck driver whose job is to deliver anesthetic gases to medical facilities. The driver mistakenly hooks up the supply line of a mild anesthetic to the supply line of a hospital's oxygen system, contaminating the hospital's oxygen supply. Why did the driver make this mistake, which is clearly a performance problem? The driver may have made this mistake because of a lack of knowledge about the appropriate line hookup for the anesthetic, because of anger over a requested salary increase that his manager recently denied, or because of mislabeled valves for connecting the gas supply. Only the lack of knowledge can be addressed by training. The other pressure points require reviewing and making decisions related to the driver's anger-motivated behavior (fire the driver) or the design of the work environment (remind supervisors and drivers to check that valves and hookup lines are properly labeled at all work sites).

FIGURE 3.1 Causes and Outcomes of Needs Assessment



What outcomes result from a needs assessment? Needs assessment provides important input into most of the remaining steps in the training design. As shown in **Figure 3.1**, the needs assessment process results in information related to who needs training and what trainees need to learn, including the tasks in which they need to be trained, plus any other knowledge, skill, behavior, or additional job requirements. Needs assessment helps determine whether the company will outsource its training (i.e., purchase training from a vendor or consultant) or develop training through internal resources. Determining exactly what trainees need to learn is critical for the next step in the instructional design process: identifying learning outcomes and objectives. **Chapter Four**, "Learning and Transfer of Training," explores identifying learning outcomes and learning objectives and creating a training environment so that learning occurs and is used on the job. Through identifying the learning outcomes and resources available for training, the needs assessment also provides information that helps the company choose the appropriate training or development method (discussed in **Part Three** of this book). Needs assessment also provides information regarding the outcomes that should be collected to evaluate training effectiveness. The process of evaluating training is discussed in **Chapter Six**, "Training Evaluation."

Who Should Participate in Needs Assessment?

Because the goal of needs assessment is to determine whether a training need exists, who it exists for, and for what tasks training is needed, it is important that all stakeholders are included in the needs assessment. **Stakeholders** include persons in the organization who have an interest in training and development and whose support is important for determining its success (or failure). Stakeholders include company leaders and top-level managers, mid-level managers, trainers, and employees who are end users of learning. There are several ways to ensure that stakeholders are involved in needs assessment. One way is through establishing formal advisory groups that meet on a regular basis to discuss learning issues. Another way is to ensure that relevant stakeholders are included in interviews, focus groups, crowdsourcing, and surveys used for needs assessment. Traditionally, only trainers were concerned with the needs assessment process. But, as **Chapter Two** showed, as training is increasingly being used to help the company achieve its strategic goals, both upper- and mid-level managers are becoming involved in the needs assessment process.

Table 3.1 shows the questions that company leaders, mid-level managers, trainers, and employees are interested in answering for organizational analysis, person analysis, and task analysis. Company leaders include directors, CEOs, and vice presidents. Company leaders view the needs assessment process from the broader company perspective rather than focusing on specific jobs. Company leaders are involved in the needs assessment process to identify the role of training in relation to other human resource practices in the company (e.g., selection and compensation of employees). Company leaders want training to anticipate needs and to be aligned with where the business is going. Training and development need to improve employee performance in such a way that they support the business strategy. Learning efforts (training, development, knowledge management) need to take an integrated and holistic approach—rather than consist of a series of fragmented courses or programs—and add value to the company. Company leaders are also involved in identifying what business functions or units need training (person analysis) and in determining if the company has the necessary knowledge, skills, and abilities in its workforce to meet the company's strategy and be competitive in the marketplace.

Mid-level managers are more concerned with how training may affect the attainment of financial goals for the particular units they supervise. As a result, for mid-level managers, organizational analysis focuses on identifying: (1) how much of their budgets they want to devote to training; (2) the types of employees who should receive training (e.g., engineers, or core employees who are directly involved in producing goods or providing services); and (3) for which jobs training could make a difference in terms of improving products or customer service.

TABLE 3.1 Key Concerns of Company Leaders, Mid-Level Managers, Trainers, and Employees in Needs Assessment

	Company Leaders	Mid-Level Managers	Trainers	Employees
Organizational Analysis	Is training important to achieve our business objectives? How does training support our business strategy?	Do I want to spend money on training? How much?	Do I have the budget to buy training services? Will managers support training?	Is learning rewarded? Can I advance my career? Does my manager encourage and allow me to attend training? Can I access learning?
	What are the threats to our talent base?	How will training and development help meet my business goals? Are we retaining top talent?		
Person Analysis	Do employees in specific functions or business units need training?	Who should be trained? Managers? Professionals? Core employees?	How will I identify which employees need training?	Do I want to learn? Can I learn the training content? Will the content be valuable to me?
	What do employees need to do to accomplish our business objectives?			
Task Analysis	Does the company have people with the knowledge, skills, and abilities or competencies needed to compete in the marketplace?	For what jobs can training make the biggest difference in product quality or customer service?	For what tasks should employees be trained? What knowledge, skills, ability, or other characteristics are necessary?	What knowledge, skills, tasks, or competencies do I need for my current job? Future jobs? My career?

A **learning council** is a group of key stakeholders, typically including executives, company leaders, and other important stakeholders who are asked to provide insight and recommendations about the company's training needs. Consider how Vi and AARP use learning councils in needs assessment.[4] For example, Vi is a Chicago-based company that operates 10 luxury senior living facilities across the United States. Vi's learning team relies on a learning council consisting of executive leaders to annually help identify and prioritize training needs. The learning council considers training needs based on business problems, resident care, service quality, safety, financial results, sales, retention, and employee attitude survey results. Managers are asked to provide their reactions to the needs identified by the learning council. Based on this input, the learning team develops their learning strategy. AARP, a non profit organization serving individuals 50 years and older, relied on its learning council to develop its learning strategy goals. The learning council included key stakeholders from each of the organization's business units. The learning council is charged with evaluating requests for new training programs and reviewing existing courses.

As discussed in **Chapter Two**, trainers (including training managers and instructional designers) need to consider whether training is aligned with the business strategy. However, trainers are primarily interested in needs assessment to provide them with the information they need to administer, develop, and support training programs. This information includes determining if training should be purchased or developed in-house, identifying the tasks for which employees need to be trained, and determining upper- and mid-level managers' interest in and support for training.

Employees have several interests in needs assessment. From an organizational perspective, they are concerned with how the company values learning: Is learning rewarded? Does learning help them improve their job performance or meet their career goals? Is it easy to get access to formal and informal learning opportunities? They also want to know if their manager can be expected to encourage them to take courses and programs or informally learn, and whether they will be given support in applying what they have learned. Employees have to determine whether they are motivated to learn, as well as what tasks, knowledge, skills, or competencies they need for their current job or career.

Company leaders are usually involved in determining whether training meets the company's strategy and then providing the appropriate financial resources. Upper-level managers are not usually involved in identifying which employees need training, the tasks for which training is needed, or the knowledge, skills, abilities, and other characteristics needed to complete those tasks. This is the role of subject-matter experts. **Subject-matter experts (SMEs)** are employees, academics, managers, technical experts, trainers, and even customers or suppliers who are knowledgeable with regard to (1) training issues, including tasks to be performed; (2) the knowledge, skills, and abilities required for successful task performance; (3) the necessary equipment; and (4) the conditions under which the tasks have to be performed. A key issue with SMEs is making sure that they are knowledgeable about the content that training must cover, as well as realistic enough to be able to prioritize what content is critical to cover in the time allotted for the subject in the training curriculum. SMEs must also have information that is relevant to the company's business and have an understanding of the company's language, tools, and products. There is no rule regarding how many types of employees should be represented in the group conducting the needs assessment. Still, it is important to get a sample of **job incumbents** (employees who are currently performing the job) involved in the process because they tend to be most knowledgeable about the job. Also, these employees can be a great hindrance to the training process if they do not feel they have had input into the needs assessment.

MasTec, a construction company that engineers, procures, constructs, and maintains the infrastructures for electric power transmission and distribution, oil and natural gas pipelines, and communications companies, wanted to develop an online learning management system through which employees could access training and development courses.[5] MasTec conducted a needs assessment to determine the technology and functionality that was needed to support new training programs and to identify unique employee needs. The development team started by conducting a stakeholder analysis. This involved considering who would be involved in the process, understanding how to partner with them, and determining what type of information they could offer. It included meeting with safety team leaders, trainers, and construction crew members, observing employees performing their jobs, and attending existing training classes. The development team recorded every need and request made throughout this process. As a result of this analysis, it identified four goals for the learning management system. These goals included (1) increasing the accessibility of training content; (2) increasing the flexibility and variety in how training is delivered and completed; (3) improving the training registration process for employees; and (4) creating reporting tools to make training requirements, participation, and completion visible to employees, their managers, and the employee development group.

At Fatima Fertilizer Company in Pakistan, engineers or technicians who have become training coordinators work with employees and managers to measure performance and determine training needs based on the knowledge and competency goals established for each department. Each department submits monthly training reports to the training and development team. Executive and department committees meet quarterly with the training and development team to review their progress toward meeting the knowledge and competency goals and to make adjustments in training plans.[6]

Methods Used in Needs Assessment

Several methods are used to conduct needs assessment, including observing employees performing the job; interviewing SMEs; asking SMEs to complete surveys designed to identify the tasks and knowledge, skills, abilities, and other characteristics required for a job; conducting focus groups with SMEs; reading technical manuals and other documentation; using technology; and using historical data. **Table 3.2** presents the advantages and disadvantages of each method.

TABLE 3.2 Advantages and Disadvantages of Needs Assessment Techniques

Technique	Advantages	Disadvantages
Observation	• Generates data relevant to work environment • Minimizes interruption of work	• Needs skilled observers • Employees' behavior may be affected by being observed
Surveys	• Inexpensive • Can collect data from a large number of persons • Data easily summarized	• Requires time • Possible low return rates; inappropriate responses • Lacks detail • Only provides information directly related to questions asked
Interviews	• Good at uncovering details of training needs, as well as causes of and solutions to problems • Can explore unanticipated issues that come up • Questions can be modified	• Time consuming • Difficult to analyze • Needs skilled interviewers • Can be threatening to SMEs • Difficult to schedule • SMEs provide only information they think you want to hear
Focus groups, Crowdsourcing	• Useful with complex or controversial issues that one person may be unable or unwilling to explore • Questions can be modified to explore unanticipated issues • Reduces risk that training based on needs assessment will be rejected by stakeholders	• Time-consuming to organize • Group members provide only information they think you want to hear

Technique	Advantages	Disadvantages
Documentation (technical manuals, records, research studies)	• Good source of information on procedure • Objective • Good source of task information for new jobs and jobs in the process of being created	• You may be unable to understand technical language • Materials may be obsolete
Technology	• Objective • Minimizes interruption of work • Requires limited human involvement • Data can be quickly summarized into reports	• May threaten employees • Manager may use information to punish rather than train
Historical data reviews	• Provide data related to performance and practices	• Available data may be inaccurate or incomplete, or may not fully represent performance

Sources: Based on A. Kuzel, "How to Conduct a Learning Audit," *Chief Learning Officer,* November/December 2016, pp. 23–25, 66; S. V. Steadham, "Learning to Select a Needs Assessment Strategy," *Training and Development Journal,* January 1980, pp. 56–61; R. J. Mirabile, "Everything You Wanted to Know About Competency Modeling," *Training and Development,* August 1997, p. 74; K. Gupta, *A Practical Guide to Needs Assessment* (San Francisco: Jossey-Bass, 1999); M. Casey and D. Doverspike, "Training Needs Analysis and Evaluation for New Technologies Through the Use of Problem-Based Inquiry," *Performance Improvement Quarterly* 18, 1 (2005), pp. 110–24.

Face-to-face and telephone interviews are time-consuming, but more detailed information regarding training needs can be collected. Nestlé USA, a consumer package goods company, identified the need to develop strong leaders, especially employees taking a managerial position for the first time in their careers.[7] To identify the concerns of employees taking a managerial role, the learning and development team conducted interviews with the new leaders and their managers. The interviews revealed that new leaders struggled with the transition from doing the work alone to delegating and managing others' work. They felt isolated and unprepared for their new position. Their managers found it difficult to identify the skills the new managers needed to develop. From the interviews the learning and development team determined that the new managers needed to build skills in coaching, leading difficult conversations, delegating, leading career conversations, building and managing resiliency, and understanding expectations and resources.

The advantage of surveys is that information can be collected from a large number of persons. Also, surveys allow many employees to participate in the needs assessment process. However, when using surveys, it is difficult to collect detailed information regarding training needs. **Focus groups** are a type of SME interview that involves a face-to-face meeting with groups of stakeholders or SMEs in which the questions that are asked relate to specific training needs. For example, the learning team at Cartus uses focus groups consisting of managers and employees from the department for which training is being developed.[8] The focus groups discuss the department's business goals and the gaps they feel need to be closed to reach those goals. The focus groups help identify and prioritize training needs. Crowdsourcing can also be used for needs assessment. In this context, **crowdsourcing** refers to asking stakeholders to provide information for needs assessment. Computer Services Corporation uses "Ideation," a web-based tool for collaboration and crowdsourcing, to help identify training needs.[9] The process requires a review team to filter, sort, and build on the best ideas. The process allows the learning department to get a larger number of employees involved in the needs assessment process rather than relying only on interviews with SMEs. It is important to verify the results of interviews, surveys, and focus groups however, because what employees and managers say they do and what they really do may differ.

For newly created jobs, trainers often do not have job incumbents to rely on for needs assessment information. Technical diagrams, research studies, simulations, and equipment designers can provide information regarding the training requirements, tasks, and conditions under which a job is performed. This information is especially useful for newly created jobs where trainers do not have job incumbents they can observe, survey, interview, or ask to participate in a focus group. LeadingRE used the results of a research study it purchased from a consulting firm as part of its needs assessment.[10] The research study identified residential real estate customers' interests, desires, emotions, attitudes, and lifestyles. LeadingRE used this information to design training to teach its agents the types of questions to ask their customers to better understand their preferences, create stronger relationships, and enhance sales.

Technology that monitors employee behavior and performance also can be used for needs assessment. Software and wearables such as Google glasses can be used to collect data on employee behavior and performance. For example, employees in the melt department at H&H Castings have a demanding and potentially dangerous job that requires them to pour hot aluminum into casting molds.[11] To reduce the risk of accidents and improve new employee training, H&H Castings analyzed the job tasks of its melt department employees and identified the procedures needed to complete them. To identify the tasks and procedures, employees wore eye-tracking glasses as they worked. A computer connected to the eye-tracking glasses recorded what employees were looking at as they worked and provided a detailed and precise view of how employees completed their job tasks. The results showed that the work requires a high level of concentration. The perspective obtained from the eye-tracking glasses was used to create videos that are now used for both training new employees and identifying changes that could be made to make the mold-pouring process safer and more efficient. This information also is useful for identifying training needs and providing employees with feedback regarding their skill strengths and weaknesses. In call centers, technology provides an ongoing assessment of performance.[12] An employee who triggers the online system by failing to meet a defined standard, such as receiving more than five callbacks on an unresolved issue, is automatically referred to the appropriate job aid or training event. As shown in **Table 3.2**, online technology offers several advantages: it provides an objective report of behaviors, the data can be quickly summarized into reports, it does not require a trainer or SME to observe or interview employees, and it minimizes work interruptions. However, for technology to be effective, managers need to ensure that the information is used to train employees, rather than punish them. Otherwise, employees will feel threatened, which will contribute to employee dissatisfaction and turnover.

Data reviews can also provide helpful information to determine training needs. Data reviews involve collecting and analyzing performance data from electronic or paper records. It provides information regarding current performance levels, which is useful for identifying gaps between actual and desired performance. For companies that have introduced a new technology, another source of historical data is the help desk that companies often set up to deal with calls regarding problems, deficiencies in training, or deficiencies in documentation, software, or systems.[13] Help-desk management software can categorize and track calls and questions by application, by caller, or by vendor. Report creation capability built into the software makes it easy to generate documents on user problems and identify themes among calls. Analyzing these calls is practical for identifying gaps in training. Common types of call problems can be analyzed to determine if they are due to inadequate coverage in the training program and/or inadequate written documentation and job aids used by trainees.

Consider how KCB Bank used data reviews to help identify training needs.[14] In the last three years, the number of in-person transactions made at KCB Group bank branches decreased from 36 to 12 percent as more customers relied on online banking tools. To determine if its relationship managers needed training to better serve customers due to the increase in digital banking, the talent development team conducted a needs assessment. During the needs assessment, the team considered key success metrics for the branches including customer wait times, time to serve customers, portfolio of products held per customer, profitability, complaints, and staff productivity. It also visited branches to observe customer interactions and talk to staff about their daily activities and learning gaps.

Because no single method of conducting needs assessment is superior to the others, multiple methods are usually used. The methods vary in the type of information, as well as the level of detail provided. Samsung Electronics uses multiple methods and involves multiple stakeholders to determine training needs.[15] Twice a year at company headquarters, the talent development team holds a business strategy that includes the top 100 leaders from the company's locations from around the world. The purpose of the seminar is to review short- and long-term business plans and goals and identify how training can support them. Also, annually the talent development team conducts employee and manager surveys in each country where it has operations and follows up with interviews to better understand the results. The talent team meets with company leaders from each country to discuss how training could help meet the needs of their business. Based on the information gathered from the surveys, interviews, and meetings, the talent development team prioritizes training needs, how they plan to meet those needs, and the budget needed. Every month the team meets to discuss progress and results, review training and business metrics, and make any adjustments needed to training plans and priorities.

Many companies are also using information about other companies' training practices (a process known as **benchmarking**) to help determine the appropriate type, level, and frequency of training.[16] For example, UPS, Walmart, Comcast, Delta Airlines, Pfizer, and 50 other companies are members of the ATD (Association for Talent Development) forum.[17] Each company completes a common survey instrument, responding to questions on training costs, staff size, administration, design, program development, and delivery. The information is then summarized and shared with the participating companies.

The Needs Assessment Process

This section examines the three elements of needs assessment: organizational analysis, person analysis, and task analysis. **Figure 3.2** illustrates the needs assessment process. While any one analysis can indicate the need for training, companies need to consider the information from all three types of analysis before the decision is made to devote time and money to training. In practice, organizational analysis, person analysis, and task analysis are not conducted in any order. However, because organizational analysis is concerned with identifying whether training suits the company's strategic objectives and whether the company has the budget, time, and expertise for training (the context for training), it is usually conducted first. Person analysis and task analysis are often conducted at the same time because it is difficult to determine whether performance deficiencies are a training problem without first understanding the tasks and the work environment. An initial organizational analysis may suggest that a company does not want to spend financial resources on training. However, if person analysis reveals that a large number of employees lack a skill in an important area that is related to the company's business objectives (such as customer service), upper-level managers may decide to reallocate financial resources for training.

Organizational Analysis

Organizational analysis involves identifying whether training supports the company's strategic direction; whether managers, peers, and employees support training activity; and what training resources are available. **Table 3.3** provides questions that trainers should ask in an organizational analysis. Some combination of documentation, interviews, focus groups, or surveys of managers, individuals in the training function, and employees should be used to answer these questions.

FIGURE 3.2 The Needs Assessment Process

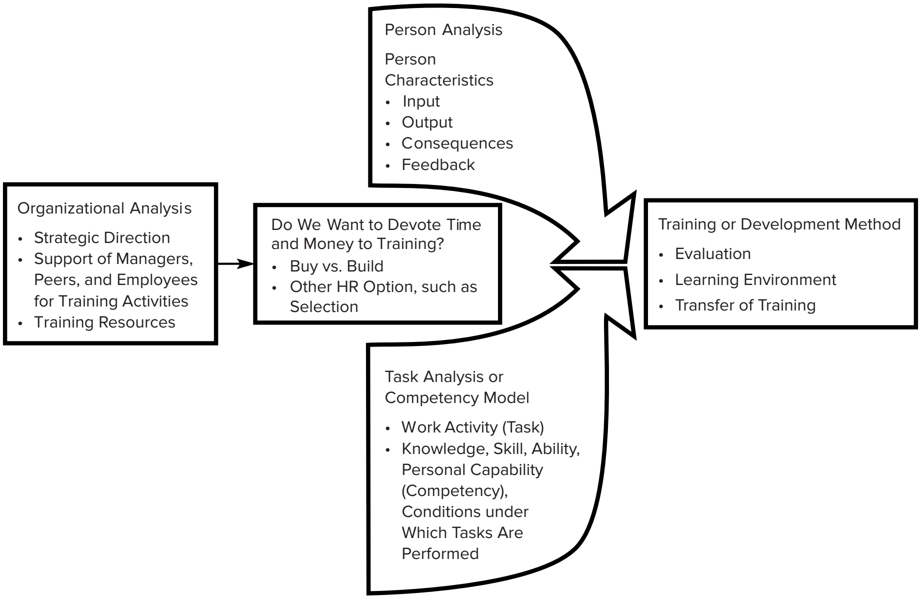


TABLE 3.3 Questions to Ask in an Organizational Analysis

- How might the training content affect our employees' relationship with our customers?
- What might suppliers, customers, or partners need to know about the training program?
- How does this program align with the strategic needs of the business?
- What business and performance results do clients of training and development (typically business leaders) want?
- Should organizational resources be devoted to this program?
- What do we need from managers and peers for this training to succeed?
- What features of the work environment might interfere with training (e.g., lack of equipment, no time to use new skills)?
- Do we have experts who can help us develop the program content and ensure that we understand the needs of the business as we develop the program?
- Will employees perceive the training program as an opportunity? Reward? Punishment? Waste of time?
- Which persons or groups (e.g., employees, managers, vendors, suppliers, and/or program developers) have an interest in seeing training succeed? Whose support do we need?

Sources: Based on D. Robinson, "Transitioning from Order-Taker to Impact-Maker," *T+D,* January 2018, pp. 42–46; F. Nickols, "Why a Stakeholder Approach to Evaluating Training?" *Advances in Developing Human Resources,* February 2005, pp. 121–134; S. Tannenbaum, "A Strategic View of Organizational Training and Learning." in *Creating, Implementing, and Managing Effective Training and Development*, ed. K. Kraiger (San Francisco: Jossey-Bass, 2002), pp. 10–52.

The Company's Strategic Direction

How the company's business strategy influences training was discussed in **Chapter Two**. The strategic role of training influences the frequency and type of training and how the training function is organized in the company. In companies in which training is expected to contribute to the achievement of business strategies and goals, the amount of money allocated to training and the frequency of training will likely be higher than in companies in which training is done haphazardly or with no strategic intent. For example, companies that believe learning contributes to their competitive advantage or that have adopted high-performance work systems (e.g., teams) are likely to have greater training budgets and conduct more training. The business strategy also influences the type of training. For example, as noted in **Chapter Two**, companies that have adopted a disinvestment strategy are more likely to focus on outplacement assistance and job search skills training than are companies with other strategic initiatives. Last, the greater the strategic role of training, the more likely that the company will organize the training function using the business-embedded or corporate university models. Both of these models emphasize the use of training to help solve business problems.

For example, to stay competitive, IBM has to stay up-to-date on the newest technology and business trends.[18] IBM has to constantly reinvent itself to ensure that it can meet the needs of its customers. This means that employees also must continue to develop new knowledge and skills. From a learning perspective, IBM has to ensure that the learning content it offers, including both face-to-face and online courses, provides employees with the latest knowledge and skills. To accomplish this, IBM keeps track of both how often employees use the learning content it offers as well as how useful that content is, based on employees' evaluations. As a result of reviewing learning content use, IBM eliminated 39 percent of the learning content that few employees found useful or used. This included 7,600 courses!

Support of Managers, Peers, and Employees for Training Activities

A number of studies have found that peer and manager support for training is critical, along with employee enthusiasm and motivation to attend training. The key factors for success are a positive attitude among peers, managers, and employees about participation in training activities; managers' and peers' willingness to provide information to trainees about how they can use the knowledge, skills, or behaviors learned in training to perform their jobs more effectively; and opportunities for trainees to use training content in their jobs.[19] If peers' and managers' attitudes and behaviors are not supportive, employees are not likely to apply training content to their jobs.

Training Resources

It is necessary to identify whether the company has the budget, time, and expertise for training. One of the questions that the company must answer is whether it has the resources (i.e., time, money, and expertise) to build or develop training programs itself or whether it should buy them from a vendor or consulting firm. This is known as the "buy versus build" decision. For example, if the company is installing computer-based manufacturing equipment in one of its plants, it has three possible strategies for dealing with the need to have computer-literate employees. First, the company may decide that, given its staff expertise and budget, it can use internal consultants to train all affected employees. Second, the company may decide that it is more cost effective to identify employees who are computer literate by using tests and work samples. Employees who fail the test or perform below standards on the work sample can be reassigned to other jobs. Choosing this strategy suggests that the company has decided to devote resources to selection and placement rather than training. Third, because it lacks time or expertise, the company may decide to buy training from a consultant. We will discuss how to identify and choose a high-quality vendor or consultant to provide training services in **Chapter Five**, "Program Design."

One way to identify training resources is for companies with similar operations or departments located across the country or the world to share ideas and practices. Kaiser Permanente, a California-based health-care company, is organized by regional business units.[20] In each region the company integrates health-care delivery, including hospitals, outpatient services, and insurance providers. One of its concerns was how to provide consistent and high-quality learning and development opportunities for employees in all of the regions. To do so, the vice president of learning and development created a group, the National Learning Leaders, which includes leaders from account management, sales, compliance, quality improvement, and patient safety. The National Learning Leaders meet three times every year and in smaller working groups in the months when the full membership is not scheduled to meet. They discuss how to develop learning solutions that can be implemented across the business and what kinds of services should be provided by the learning organizations within each region. This has resulted in learning initiatives that are consistent across the regions and delivered in a way that enhances employee participation. For example, based on input from the National Learning Leaders, online and hybrid training courses on patient safety were developed. So far, 19,000 employees have completed these modules, compared to only 50 who attended classroom-based training.

Person Analysis

Person analysis helps identify employees who need training, perhaps due to lack of training or poor previous training. This is often referred to as a gap analysis. A **gap analysis** includes determining what is responsible for the difference between employees' current and expected performance. The need for training may result from the pressure points in **Figure 3.1**, including performance problems, changes in the job, or the use of new technology. Person analysis also helps to determine employees' readiness for training. **Readiness for training** refers to whether (1) employees have the personal characteristics (ability, attitudes, beliefs, and motivation) necessary to learn program content and apply it on the job, and (2) the work environment will facilitate learning and not interfere with performance. This process includes evaluating person characteristics, input, output, consequences, and feedback.[21]

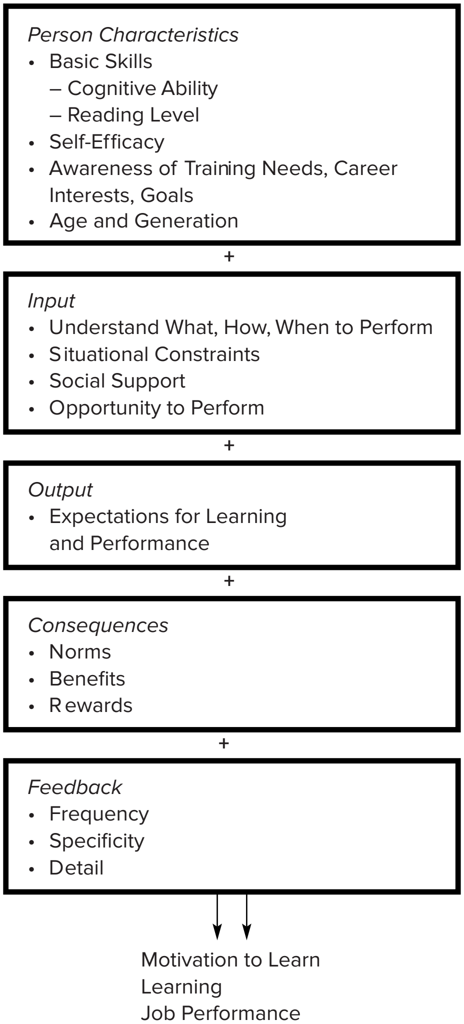
A major pressure point for training is poor or substandard performance. Poor performance is indicated by customer complaints, low performance ratings, or on-the-job incidents such as accidents and unsafe behavior. Another potential indicator of the need for training is if the job changes such that current levels of performance need to be improved or employees must be able to complete new tasks.

The Process for Person Analysis

Figure 3.3 shows the process for analyzing the factors that influence performance and learning. **Person characteristics** refer to employee knowledge, skill, ability, and attitudes. **Input** relates to the instructions that tell employees what, how, and when to perform. Input also refers to the resources that the employees are given to help them perform. These resources may relate to equipment, time, or budget. **Output** refers to the job's performance standards. **Consequences** refer to the type of incentives that employees receive for performing well. **Feedback** refers to the information that employees receive while they are performing.

Interviews or questionnaires can be used to measure person characteristics, input, output, consequences, and feedback. For example, a package delivery company believed that lead drivers were valuable for providing on-the-job training for new employees.[22] The company employed 110 lead drivers, and the job involved driving, delivery, and bookkeeping duties. The lead drivers benefited from their training role because coaching and training made their jobs more interesting, and the company benefited because on-the-job training was relatively inexpensive and effective. Lead drivers were often able to quickly spot and correct performance problems with new trainees, and they knew the technical aspects of the delivery job quite well. Although many of the lead drivers were already good trainers and coaches, the company believed that they needed to learn how to coach and train the new drivers. The company used interviews to identify what type of coaching and training skills the lead drivers needed. Interviews were conducted with 14 lead drivers, six supervisors, and two regional vice presidents. The interview for the lead drivers consisted of questions such as the following:

FIGURE 3.3 **The Process for Analyzing the Factors That Influence Employee Performance and Learning**



Sources: R. Jaenke, "Identify the Real Reasons Behind Performance Gaps," *T+D,* August 2013, pp. 76–77; C. Reinhart, "How to Leap over Barriers to Performance," *Training and Development,* January 2000, pp. 20–24; G. Rummler and K. Morrill, "The Results Chain," *T+D,* February 2005, pp. 27–35.

- What types of situations call for coaching on your part?
- What keeps you from being a good coach on the job?
- How do you encourage or motivate other lead drivers? Do you use incentives or rewards? Do you try other things (compliments, personal attention)?
- What common types of performance problems do new hires have?
- What were the biggest problems you encountered as a new coach and trainer? What mistakes did you make? What lessons have you learned over time?
- Tell me about a successful coaching experience and an unsuccessful coaching experience.

Recurring trends in the interview data were noted and categorized. For example, interview questions on obstacles to coaching related to three themes: lack of time to coach, the physical environment (no privacy), and reluctance to coach peers. These three topics were covered in the coaching course.

Person characteristics, input, output, consequences, and feedback influence the motivation to learn. **Motivation to learn** is trainees' desire to learn the content of training programs.[23] Consider how your motivation to learn may be influenced by person characteristics and the environment. You may have no problem understanding and comprehending the contents of this textbook. But your learning may be inhibited because of your attitude toward the course. That is, perhaps you do not believe that the course will be important for your career. Maybe you are taking the course only because it fits your schedule or is required in your degree program. Learning may also be inhibited by the environment. For example, maybe you want to learn, but your study environment prevents you from doing so. Every time you are prepared to read and review your notes and the textbook, your roommates could be having a party. Even if you do not join them, the music may be so loud that you cannot concentrate.

Marriott International, the hotel and restaurant chain, found that personal characteristics were having a significant influence on the success rate of the company's welfare-to-work program.[24] This program involves training welfare recipients for jobs in the company's hotels and restaurants. (These types of programs are discussed in greater detail in **Chapter Ten**, "Social Responsibility: Legal Issues, Managing Diversity, and Career Challenges.") Many trainees were unable to complete the training program because of poor attendance due to unreliable child care, drug problems, or abusive partners. As a result, Marriott has instituted strict standards for selecting welfare recipients for the training program. These standards include requiring trainees to have child care, transportation, and housing arrangements. Also, Marriott added an additional drug test during training.

A number of research studies have shown that motivation to learn is related to knowledge gained, behavior changes, or skill acquisition resulting from training.[25] Besides considering the factors of person characteristics, input, output, consequences, and feedback in determining whether training is the best solution to a performance problem, managers should also take these factors into account when selecting which employees will attend a training program. These factors relate to the employees' motivation to learn. The following sections describe each of these factors and its relationship to performance and learning.

Person Characteristics

Person characteristics include basic skills, cognitive ability, language skills, and other traits that employees need to perform their jobs or learn in training and development programs effectively. Person characteristics also include employees' age or generation, which might affect how they prefer to learn. As mentioned in **Chapter One**, recent forecasts of workforce skill levels and survey results suggest that companies are experiencing a skills gap. That is, companies are having difficulty finding employees who have the right knowledge, skills, or abilities to fill open positions or to succeed in training to prepare them for today's jobs.

Basic Skills

Basic skills refer to skills that are necessary for employees to perform on the job and to learn the content of training programs successfully. Basic skills include cognitive ability and reading and writing skills. For example, one assumption that your professor is making in this course is that you have the necessary reading level to comprehend this textbook and the other course materials such as PowerPoint slides, videos, or readings. If you lack the necessary reading level, you likely will not learn much about training in this course. As **Chapter One** discussed, recent forecasts of skill levels of the U.S. workforce indicate that managers will likely have to work with employees who lack basic skills. A literacy audit can be used to determine employees' basic skill levels. **Table 3.4** shows the activities involved in conducting a literacy audit.

TABLE 3.4 Steps in Performing a Literacy Audit

Step 1:	Observe employees to determine the basic skills that they need to be successful in their job. Note the materials the employee uses on the job, the tasks performed, and the reading, writing, and computations completed.
Step 2:	Collect all materials that are written and read on the job and identify the computations that must be performed to determine the necessary level of basic skill proficiency. Materials include bills, memos, and forms such as inventory lists and requisition sheets.
Step 3:	Interview employees to determine the basic skills that they believe are needed to do the job. Consider the basic skill requirements of the job yourself.
Step 4:	Determine whether employees have the basic skills needed to perform the job successfully. Combine the information gathered by observing and interviewing employees and evaluating materials they use on the job. Write a description of each job in terms of the reading, writing, and computation skills needed to perform the job successfully.
Step 5:	Develop or buy tests that ask questions relating specifically to the employees' job. Ask employees to complete the tests.
Step 6:	Compare test results (from step 5) with the description of the basic skills required for the job (from step 4). If the level of the employees' reading, writing, and computation skills does not match the basic skills required by the job, then a basic skills problem exists.

Sources: U.S. Department of Education; U.S. Department of Labor, *The Bottom Line: Basic Skills in the Workplace* (Washington, DC: 1988), pp. 14–15.

It is important to note that possession of a high school diploma or a college degree is no guarantee that an employee has basic skills. If participants do not have the fundamental reading, writing, and math skills to understand the training, they will not be able to learn, they will not apply their training to the job (a process known as *transfer*, which is discussed in **Chapter Four**), and the company will have wasted money on training that does not work. Trainers need to evaluate the strengths and weaknesses of trainees before designing a training program. The skill weaknesses that are identified can be used to determine prerequisites that trainees need or must acquire before entering a training program. How do trainers identify skills gaps?[26] First, trainers collect general information through position-specific training materials and job descriptions. They also observe the job to become familiar with the necessary skills. Next, trainers meet with subject-matter experts (SMEs), including employees, managers, engineers, or others who are familiar with the job. With the help of these SMEs, trainers identify a list of regularly performed activities and prioritize the list according to importance. Finally, trainers identify the skills and skill levels that are needed to perform the activities or job tasks. For example, nurses must watch for changes in patient conditions, reactions, and comfort levels; they need to identify and recall details when observing patients. These activities require good observation skills, and the trainer needs to find or create a test to measure those skills. Once the skills analysis is complete, trainers conduct a basic (or pretraining) skills evaluation to identify skills gaps that need to be addressed prior to enrolling employees in a training session.

Cognitive Ability

Research shows that cognitive ability influences learning and job performance. **Cognitive ability** includes three dimensions: verbal comprehension, quantitative ability, and reasoning ability.[27] *Verbal comprehension* refers to the person's capacity to understand and use written and spoken language. *Quantitative ability* refers to how fast and accurately a person can solve math problems. *Reasoning ability* refers to the person's capacity to invent solutions to problems. Research shows that cognitive ability is related to successful performance in all jobs.[28] The importance of cognitive ability for job success increases as the job becomes more complex.

For example, a supermarket cashier needs low to moderate levels of all three dimensions of cognitive ability to perform that job successfully. The supermarket cashier needs to understand the different denominations of bills and coins to give customers the correct amount of change. The cashier also needs to invent solutions to problems. (For example, how does the cashier deal with items that are not priced that the customer wants to purchase?) Finally, the cashier needs to be able to understand and communicate with customers (verbal comprehension). In comparison, an emergency room physician needs higher levels of verbal comprehension, quantitative ability, and reasoning ability than the cashier. For example, when dealing with an infant experiencing seizures in an emergency situation, the physician needs to be able to calculate the correct dosage of medicine (based on an adult dosage) to stop the seizures after considering the child's weight. The physician also has to be able to diagnose the situation quickly and determine what actions (blood tests, x-rays, respiratory therapy, etc.) are necessary. And finally, the physician needs to communicate clearly with the patient's parents in describing the treatment and recovery process.

Trainees' level of cognitive ability also can influence how well they learn in training programs.[29] Trainees with low levels of cognitive ability are more likely to fail to complete training or (at the end of training) receive lower grades on tests that measure how much they have learned.

To identify employees without the cognitive ability to succeed on the job or in training programs, companies use cognitive ability tests. For example, consider the actions taken by the Federal Aviation Administration (FAA) to identify potential air traffic controllers who will complete training successfully.[30] Air traffic control work requires quick analytical thinking and strong communications skills. These skills are emphasized and further developed in air traffic controller training. In addition to classroom training, air traffic controllers receive training through computer-based simulations of airport towers and en route centers, which direct planes between airports. The FAA estimates that in the past, it spent $10 million per year on unsuccessful trainees, which resulted in a doubling of training costs. To reduce its training costs and increase the number of new controllers who will be successful, the FAA uses an eight-hour test of cognitive skills that identifies whether applicants can think spatially, have good short- and long-term memory, and can work well under pressure—skills that are needed by successful air traffic controllers. Determining a job's cognitive ability requirement is part of the task analysis process, discussed later in this chapter.

Reading Ability

Readability refers to the difficulty level of written materials.[31] An inappropriate reading level can impede performance and learning in training programs. Materials used in training should be evaluated to ensure that their reading level does not exceed that required by the job. A readability assessment usually involves an analysis of sentence length and word difficulty. One estimate is that 1 out of every 10 working-age adults in the United States has limited English-language proficiency.[32] An inability to speak and read English prevents workers from advancing to better-paying jobs. Companies who invest in English-language programs can open career paths and help employers retain and promote a diverse workforce.

If trainees' reading level does not match the level required by the training materials, four options are available. First, trainers can determine whether it is feasible to lower the reading level of training materials or use video or on-the-job training, which involves learning by watching and practicing rather than by reading. Second, employees without the necessary reading level could be identified through reading tests and reassigned to other positions more congruent with their skill levels. Third, again using reading tests, trainers can identify employees who lack the necessary reading skills and provide them with remedial training. Fourth, trainers can consider redesigning the job to accommodate employees' reading levels. The fourth option is certainly the most costly and least practical. Therefore, alternative training methods need to be considered, or managers can elect a non-training option. Non-training options include selecting employees for jobs and training opportunities on the basis of reading, computation, writing, and other basic skill requirements.

To develop basic skills or close the skills gap, many companies are engaging in skills assessment, training, or a combination of the two. They are working to identify and close skill gaps, either alone or in partnerships with state government agencies.[33] For example, Agricare, a farm management company, has conducted workplace

English training for three years in Oregon.[34] The company planned to expand its classes to its California locations but had to temporarily delay doing so due to the COVID-19 pandemic. The company manages 10,000 acres of farmland and employs 250 people. Its classes are also open to a sister company, Homegrown Organic Farms, which employs 45 people who sell and distribute the fruits that Agricare grows. To help employees improve their English while not being able to attend classes, the company's HR professional is reading through books with some of the employee teams. She is also encouraging employees to download language apps, and the company has purchased and distributed books (in both English and Spanish) to them to help continue building their vocabulary. Managers encourage readiness to learn at Schweitzer Engineering Laboratories, located in the state of Washington.[35] The company has a library and offers classes in math, science, and writing. The company hires for problem-solving skills, rather than educational credentials, so workers without a college degree can learn skills as needed to pursue a career path. One such worker is Roy Edwards, who was not motivated by the academic environment he experienced in college but quickly became fascinated by the activities and problems he encountered on the job. He began enrolling in the company-sponsored classes and reading about robotics and now supervises the workers who code them. His story is not uncommon at Schweitzer, where other entry-level employees also have worked their way up to positions as technicians.

PK Controls, an Ohio-based maker of automation controls, has difficulty finding the technicians it needs.[36] PK Controls does some of its own training to develop technicians but it also partners with Columbus State Community College to develop employees with the skills it needs. Along with other Ohio companies, including Honda and Worthington Industries, PK Controls participates in Columbus State's Modern Manufacturing Program, which offers an associate degree in electro-mechanical engineering. Students spend two days a week in class and three days a week on the job. On-the-job training starts after the students have completed three semesters of classes, including advanced engineering. Graduates of the program quickly get jobs that pay $50,000 to $60,000, and the companies—including PK Controls—get employees with the skills they need.

Self-Efficacy

Self-efficacy is employees' belief that they can perform their job or learn the content of the training program successfully. For many employees who may not have been successful performers in the past, the job environment can be threatening. For example, as you will see in **Chapter Ten**, employees hired through a welfare-to-work program—a program designed to help find jobs for welfare recipients—may lack self-efficacy. The training environment also can be threatening to those workers who have not received training or formal education for some length of time; lack education; or are not experienced in the training program's subject matter. For example, training employees to use equipment for computer-based manufacturing may represent a potential threat, especially if they are intimidated by new technology and lack confidence in their ability to master the skills needed to use a computer. Research has demonstrated that self-efficacy is related to performance in training programs.[37] Employees' self-efficacy level can be increased by:

1. Letting employees know that the purpose of training is to try to improve performance rather than to identify areas in which employees are incompetent.
2. Providing as much information as possible about the training program and the purpose of training prior to the actual training.
3. Showing employees the training success of their peers who are now in similar jobs.
4. Providing employees with feedback that learning is under their control and they have the ability and the responsibility to overcome any learning difficulties they experience in the program.

Awareness of Training Needs, Career Interests, and Goals

To be motivated to learn in training programs, employees must be aware of their skill strengths and weaknesses and of the link between the training program and improvement of their weaknesses.[38] Managers should make sure that employees understand why they have been asked to attend training programs, and they should communicate the link between training and the improvement of skill weaknesses or knowledge deficiencies. This can be accomplished by sharing performance feedback with employees, holding career development discussions, or having employees complete a self-evaluation of their skill strengths and weaknesses as well as career interests and goals. For example, ESL Federal Credit Union's career counseling services allow employees to proactively manage their careers.[39] Using the services, employees can explore departmental career lattices and register for job shadowing, meet with a career coach, and register for micro-internships that provide the opportunity to experience a new role to broaden their skill sets and prepare for a potential future job opportunity.

If possible, employees need to be given a choice of what programs to attend. They should also understand how actual training assignments are made, to maximize their motivation to learn. Several studies have suggested that giving trainees a choice regarding which programs to attend and then honoring those choices maximizes motivation to learn. Giving employees choices but not necessarily honoring them can undermine motivation to learn.[40]

Age

There is biological evidence that certain mental capacities decrease from age 20 to age 70.[41] Short-term memory and the speed at which people process information decline with age. However, with age also comes experience, which can compensate for the loss of memory and mental quickness. Although mental quickness and memory losses diminish at a steady pace, at older ages, memory loss is much greater because mental resources are more depleted than at earlier ages. As we discuss in **Chapter Five**, there is some evidence that certain type of training methods are more beneficial for older trainees.[42]

Input

Employees' perceptions of two characteristics of the work environment—situational constraints and social support—are determinants of performance and motivation to learn. **Situational constraints** include lack of proper tools and equipment, materials and supplies, budgetary support, and time. **Social support** refers to managers' and peers' willingness to provide feedback and reinforcement.[43] If employees have the knowledge, skills, attitudes, and behavior needed to perform but do not have the proper tools and equipment needed, their performance will be inadequate.

To ensure that the work environment enhances trainees' motivation to learn, managers should take the following steps:

1. Provide materials, time, job-related information, and other work aids necessary for employees to use new skills or behavior before participating in training programs.
2. Speak positively about the company's training programs to employees.
3. Let employees know they are doing a good job when they are using training content in their work.
4. Encourage work-group members to involve each other in trying to use new skills on the job by soliciting feedback and sharing training experiences and situations in which training content has been helpful.
5. Provide employees with time and opportunities to practice and apply new skills or behaviors to their work.

Output

Poor or substandard performance can occur on the job because employees do not know at what level they are expected to perform. For example, they may not be aware of quality standards related to speed or the degree of personalization of service that is expected. Employees may have the knowledge, skills, and attitudes necessary to perform and yet fail to perform because they are not aware of the performance standards. Lack of awareness of the performance standards is a communications problem, but it is not a problem that training can "fix."

Understanding the need to perform is important for learning. Trainees need to understand what specifically they are expected to learn in the training program. To ensure that trainees master training content at the appropriate level, trainees in training programs also need to understand the level of proficiency that is expected of them. For example, for tasks, level of proficiency relates to how well employees are to perform a task. For knowledge, level of proficiency may relate to a score on a written test. The standards or the level of performance is part of the learning objectives (discussed in **Chapter Four**).

Consequences

If employees do not believe that rewards or incentives for performance are adequate, they will be unlikely to meet performance standards even if they have the necessary knowledge, behaviors, skills, or attitudes. Also, work-group norms may encourage employees to not meet performance standards. **Norms** refer to accepted standards of behavior for work-group members. For example, during labor contract negotiations, airline baggage handlers for a major airline worked slowly loading and unloading baggage from airplanes. As a result, many passenger departures and arrivals were delayed. The baggage handlers had the knowledge, skills, and behaviors necessary to load and unload the planes more quickly, but they worked slowly because they were trying to send a message to management that the airlines could not perform effectively if their contract demands were not met.

Consequences also affect learning in training programs. Incentive systems, such as providing gift cards redeemable for food, clothes, or movies or accumulating points that can be used toward paying for enrollment in future courses, may be useful for motivating some employees to attend and complete training courses (discussed in **Chapter Five**).[44] However, one of the most powerful ways to motivate employees to attend and learn from training is to communicate the personal value of the training. For example, how will it help them improve their skills or career? How will it help them deal with problems they encounter on the job? It is important that the communication from the manager about potential benefits be realistic. Unmet expectations about training programs can hinder the motivation to learn.[45]

Feedback

Performance problems can result when employees do not receive feedback regarding the extent to which they are meeting performance standards. Employees may know what they are supposed to do (output), but they may not understand how close their performance is to the standard. Training may not be the best solution to this type of problem. Employees need to be given specific, detailed feedback regarding both effective and ineffective performance. For employees to perform to standard, feedback needs to be given frequently, not just during a yearly performance evaluation.

In **Chapter Four**, the role of feedback in learning is discussed in detail. Keep in mind that feedback is critical for shaping trainees' behaviors and skills.

Determining Whether Training Is the Best Solution

A root cause analysis is often used to determine whether training is the best solution. A **root cause analysis** refers to the process of determining whether training is the best or most likely solution to a performance problem or gap. There are four methods that are useful for conducting a root cause analysis.[46] First, the following seven questions should be considered:

1. Is the performance problem important? Does it have the potential to cost the company a significant amount of money from lost productivity or customers?
2. Do employees know how to perform effectively? Perhaps they received little or no previous training, or the training was ineffective. (This problem is a characteristic of the person.)
3. Can employees demonstrate the correct knowledge or behavior? Perhaps employees were trained but they infrequently or never used the training content (knowledge, skills, etc.) on the job. (This is an input problem.)
4. Were performance expectations clear (input)? Were there any obstacles to performance, such as faulty tools or equipment?
5. Were positive consequences offered for good performance? Was good performance not rewarded? For example, when employees are dissatisfied with their compensation, their peers or their union may encourage them to slow down their pace of work. (This involves consequences.)
6. Did employees receive timely, relevant, accurate, constructive, and specific feedback about their performance (a feedback issue)?
7. Were other solutions—such as job redesign or transferring employees to other jobs—too expensive or unrealistic?

If employees lack the knowledge and skills to perform a job and the other factors are satisfactory, training is needed. If employees have the knowledge and skills to perform but input, output, consequences, and/or feedback are inadequate, training may not be the best solution. For example, if poor performance results from faulty equipment, training cannot solve this problem, but repairing the equipment will. If poor performance results from lack of feedback, then employees may not need training, but their managers may need training on how to give performance feedback.

Second, the 5 Whys, another questioning method, can be used to explore the root cause of a problem. Examples of possible questions include, "Why are employees performing poorly?" or "Why can't employees greet customers as they enter the store?" The questions are used to identify possible causes that can be acted upon. For each cause identified, you need to consider if it is occurring because of a lack of knowledge, skills, or behaviors that can be influenced by training or if other factors are responsible. Third, the Fishbone diagram can be used. The Fishbone diagram is a structured brainstorming technique that can be used to help identify, explore, and visually display the possible causes of a problem. It considers how machines, methods, materials, measurements, the environment, and people contribute to a problem. Fourth, the 4 Square method involves drawing a square with four different themes represented: motivation, resources, training, and bad job fit. The factors that are believed to be causing the problem can be listed in the appropriate theme. The 4 Square method is useful in identifying whether training alone is the problem or if motivation, resources, and/or bad job fit are also involved. For example, if an employee knows how to perform well but there is a lack of motivation to do so, then lack of training is not the likely cause of the problem. However, if an employee doesn't know how to perform well then the lack of training is likely a probable cause of the problem.

It is also important to consider the relationships among a critical job issue (a problem or opportunity that is critical to the success of a job within the company), a critical process issue (a problem or opportunity that is critical to the success of a business process), and a critical business issue (a problem or opportunity that is critical to the success of the company).[47] If the critical job issue, critical process issue, and critical business issue are related, training should be a top priority because it will have a greater effect on business outcomes and results and will likely receive greater management support. **Table 3.5** shows the relationships among the critical job, process, and business issues for a sales representative. This analysis resulted from a request from a top manager who suggested that sales representatives needed more training because incomplete sales orders were being submitted to production.

TABLE 3.5 Example of the Relationships Among a Critical Job Issue, a Critical Process Issue, and a Critical Business Issue

Critical Job Issue	Critical Process Issue	Critical Business Issue
Desired Results	*Desired Results*	*Desired Results*
No incomplete order forms 100 percent accurate orders	Order cycle time of 3 days	Market share of 60 percent
Current Results	*Current Results*	*Current Results*
10 percent incomplete order forms 83 percent accurate orders	Order cycle time of 30 days	Market share of 48 percent

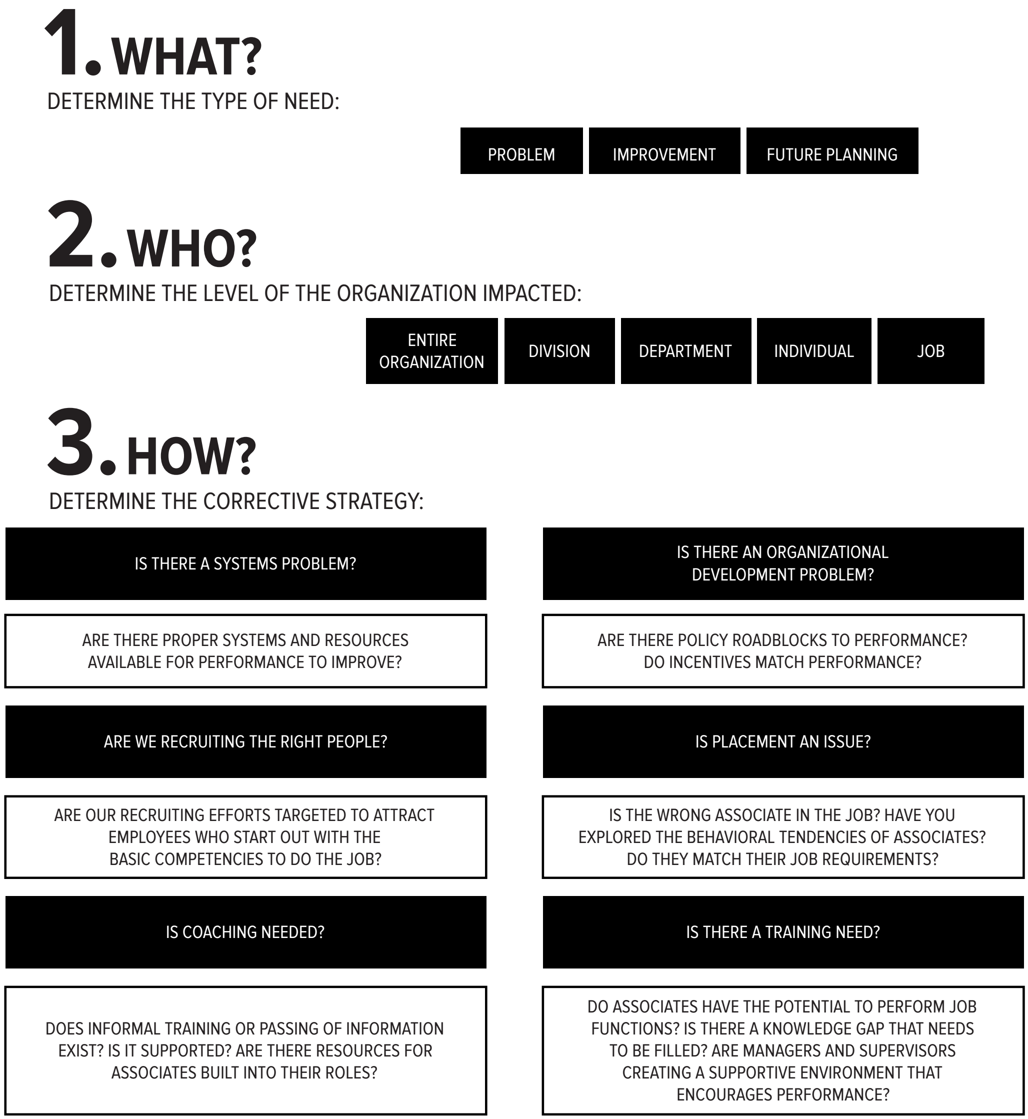
Source: Based on G. A. Rummler and K. Morrill, "The Results Chain," *T+D,* February 2005, pp. 27–35.

Papa Murphy's International, the franchise pizza store, conducted a root cause analysis to identify gaps in employees' knowledge, skills, and attitudes.[48] The analysis identified the need to provide employees, managers, and franchise owners with small chunks of learning available on an as-needed basis. Based on this analysis, the company developed a four tier learning approach. Tier 1 includes the knowledge and skills every new employees needs when they start working in a store. Tier 2 focuses on leadership, time management, and organizational skills needed by shift supervisors and assistant managers. Tier 3 focuses on the skills and knowledge needed to be an effective store manager. Tier 4 emphasizes the skills franchise owners and operators need to be successful. Consider the process a global retailer of rugged, athletic, casual, and stylish clothes for kids and young adults uses to identify whether a performance need should be addressed by training or other solutions. **Figure 3.4** shows the process this retailer uses to determine the type of need, who is affected, and the corrective strategy. As you can see from **Figure 3.4**, training and development is only one of several possible solutions and addresses issues related specifically to knowledge gaps, sharing knowledge and skills, informal learning, and manager and supervisor support.

Task Analysis

Task analysis results in a description of work activities, including tasks performed by the employee and the knowledge, skills, and abilities required to complete the tasks. A **job** is a specific position requiring the completion of certain tasks. A **task** is the employee's work activity in a specific job. **Table 3.6** shows several tasks for the territory manager job. To complete these tasks, employees must have specific levels of knowledge, skill, ability, and other considerations (KSAOs). **Knowledge** includes facts or procedures. **Table 3.8** later in this section shows examples of the knowledge needed for tasks for the territory manager job. **Skill** indicates competency in performing a task. For the territory manager job, analyzing data and information is necessary for identifying underlying principles, reasons, or facts, making appropriate recommendations or decisions, and anticipating problems, opportunities, and needs of customers. **Ability** includes the physical and mental capacities to perform a task. One of the abilities for the territory manager's job is stress tolerance, which involves accepting criticism and dealing calmly and effectively with high stress situations. **Other** refers to the

FIGURE 3.4 Identifying How to Solve Performance Issues



conditions under which tasks are performed. These conditions include identifying the equipment involved and the environment in which the employee works (e.g., the need to wear an oxygen mask and work in extremely hot conditions), time constraints for a task (e.g., deadlines), safety considerations, or performance standards. For the territory manager, an important condition is willingness to travel to different locations within a state or territory.

Task analysis should be undertaken only after the organizational analysis has determined that the company wants to devote time and money for training. Why? Task analysis is a time-consuming, tedious process that involves a large time commitment to gather and summarize data from many different persons in the company, including managers, job incumbents, and trainers.

Steps in a Task Analysis

A task analysis involves four steps:[49]

1. Select the job or jobs to be analyzed.
2. Develop a preliminary list of tasks performed on the job by (1) interviewing and observing expert employees and their managers and (2) talking with others who have performed a task analysis.
3. Validate or confirm the preliminary list of tasks. This step involves having a group of SMEs (job incumbents, managers, etc.) answer several questions regarding the tasks, either in a meeting or on a written survey. The types of questions that may be asked include the following: How frequently is the task performed? How much time is spent performing each task? How important or critical is the task for successful performance of the job? How difficult is the task to learn? Is performance of the task expected of entry-level employees?

   Table 3.6 presents a sample of part of a task analysis questionnaire. This information is used to determine which tasks will be focused on in the training program. The person or committee conducting the needs assessment must decide the level of ratings across dimensions that will determine that a task should be included in the training program. Tasks that are important, frequently performed, and of moderate-to-high level of difficulty are tasks for which training should be provided. Tasks that are not important or are infrequently performed should not involve training. Based on understanding the job and the implications of errors or mistakes in completing tasks, managers and trainers need to decide if tasks that are important but performed infrequently and require minimal difficulty should be included in training. Also, managers and trainers must determine whether or not important tasks—regardless of how frequently they are performed or their level of difficulty—will be included in training.

TABLE 3.6 **Sample Task Analysis Questionnaire**

Name	Date
Position	
Please rate each of the task statements according to three factors: (1) the *importance* of the task for effective performance, (2) how *frequently* the task is performed, and (3) the degree of *difficulty* required to become effective in the task. Use the following scales in making your ratings.	
Importance	*Frequency*
4 = Task is critical for effective performance.	4 = Task is performed once a day.
3 = Task is important but not critical for effective performance.	3 = Task is performed once a week.
2 = Task is of some importance for effective performance.	2 = Task is performed once every few months.
1 = Task is of no importance for effective performance.	1 = Task is performed once or twice a year.
0 = Task is not performed.	0 = Task is not performed.
Difficulty	
4 = Effective performance of the task requires extensive prior experience and/or training (12–18 months or longer).	

continued

3 = Effective performance of the task requires minimal prior experience and training (6–12 months).
2 = Effective performance of the task requires a brief period of prior training and experience (1–6 months).
1 = Effective performance of the task does not require specific prior training and/or experience.
0 = This task is not performed.

Task	*Importance*	*Frequency*	*Difficulty*
1. Manage the production and profitability with all agencies in the assigned sales territory			
2. Understand the agents' business, including their sales, support, and service strategies			
3. Recommend company products to the agents expertly			
4. Establish, implement, and monitor annual business plans for agencies in the assigned sales territory			
5. Develop and maintain relationships with agencies; manage their expectation and help them when needed			

4. Once the tasks have been identified, it is important to identify the knowledge, skills, or abilities that are difficult to learn or prone to errors, such as those required for decision-making or problem-solving tasks. For these tasks it is necessary to determine how the thought processes of experts differ from those of novices. This information is useful for designing training that includes the right amount of practice and feedback for novices to learn. This information can be collected through interviews and questionnaires. Recall this chapter's discussion of how ability influences learning. Information concerning basic skill and cognitive ability requirements is critical for determining if certain levels of knowledge, skills, and abilities will be prerequisites for entrance to the training program (or job) or if supplementary training in underlying skills is needed. For training purposes, information concerning how difficult it is to learn the knowledge, skill, or ability is important—as is whether the knowledge, skill, or ability is expected to be acquired by the employee before taking the job.[50]

Table 3.7 summarizes key points to remember regarding task analysis.

TABLE 3.7 Key Points to Remember When Conducting a Task Analysis

- A task analysis should identify both what employees are actually doing and what they should be doing on the job.
- Task analysis begins by breaking the job into duties and tasks.
- Use more than two methods for collecting task information to increase the validity of the analysis.

- For task analysis to be useful, information needs to be collected from SMEs, including job incumbents, managers, and employees familiar with the job.
- In deciding how to evaluate tasks, the focus should be on tasks necessary to accomplish the company's goals and objectives. These may not be the tasks that are the most difficult or take the most time.

Sources: Based on A. P. Carnevale, L. J. Gainer, and A. S. Meltzer, *Workplace Basics Training Manual* (San Francisco: Jossey-Bass, 1990); E. A. Surface, "Training Need Assessment: Aligning Learning and Capability with Performance Requirements and Organizational Objectives," in *The Handbook of Work Analysis: Methods, Systems, Applications and Science of Work Measurement in Organizations*, 1st ed., eds. M. A. Wilson, W. Bennett, S. G. Gibson, and M. Alliger (Routledge Academic, 2012), pp. 437–62.

Example of a Task Analysis

Each of the four steps of a task analysis can be seen in the following example from an insurance company in **Table 3.8**.[51] First, the territory manager job was the focus of the task analysis. The reason this job was chosen was because of the need to identify tasks and KSAOs that would serve as the basis for the training program objectives and lesson plans.

TABLE 3.8 Sample of a Task-KSAO Grid for Territory Manager

		Manage the production and profitability with all agencies in the assigned sales territory	**Understand the agents' business, including their sales, support, and service strategies**	**Recommend Grange products to the agents expertly**	**Establish, implement, and monitor annual business plans for agencies in the assigned sales territory**
KNOWLEDGE		**T1**	**T2**	**T3**	**T4**
Knowledge of company products	**K1**	X		X	
Knowledge of insurance industry / rules and policies	**K2**		X	X	
Knowledge of Customer Relation Management (CRM) software	**K3**	X	X		X
Knowledge of IBM On-Demand program	**K4**	X	X		X

The second step involved interviews with SMEs (managers, job incumbents). The purpose of the interviews was to identify the job's main duties and responsibilities, tools, software, or other aid needed to complete each duty, how success in the job was determined, records or reports prepared, and level of responsibility, autonomy, and accountability. Based on this information, a list of tasks was developed. SMEs reviewed the list to categorize the tasks by area of job responsibility. The tasks were grouped into five areas of responsibility: agency management, coordination with profit center, market analysis, external relations, and administration. For example, the task "Manage the production and profitability with all agencies in the assigned sales territory" was considered a responsibility of agency management. The job responsibilities and task list were reviewed by the SMEs to ensure that it was complete and accurate.

The third step involved developing a questionnaire including the tasks. The questionnaire was administered to all territory managers and their bosses. The questionnaire included 19 tasks. **Table 3.6** shows a sample from the questionnaire. Territory managers and their bosses were asked to rate each task on importance, frequency, and difficulty. The primary requirement used to determine whether a task required training was its importance rating. A task rated "very important" was identified as one requiring training regardless of its frequency or difficulty. If a task was rated moderately important but difficult, it also was designated for training. Tasks rated as unimportant, not difficult, or done infrequently were not designated for training.

The fourth step included identifying the knowledge, skills, abilities, and other important characteristics needed to complete the tasks. Focus groups with the SMEs identified nine different types of knowledge (e.g., knowledge of the company's insurance products, computer software, sales and marketing) and twelve skills (e.g., analyzing data and other information, verbal and written communications) abilities (e.g., stress tolerance), and other characteristics (e.g., willingness to travel). A grid showing each task and the knowledge, skills, abilities, and other characteristics required to complete it was developed. **Table 3.8** shows a sample of part of the grid. An "X" indicates the KSAO shown is necessary for the task.

The tasks that were identified based on the ratings as designated for training, and their corresponding area of job responsibility were used to develop course objectives and lesson plans. The tasks were also reviewed to identify prerequisite or required KSAOs for the tasks and area of job responsibility.

Competency Models

In today's global and competitive business environment, many companies are finding that it is difficult to determine whether employees have the capabilities needed for success. The necessary capabilities may vary from one business unit to another and even across roles within a business unit. As a result, many companies are using competency models to help them identify the knowledge, skills, and personal characteristics (attitudes, personality) needed for successful performance in a job. Competency models are also useful for ensuring that training and development systems are contributing to the development of such knowledge, skills, and personal characteristics.

Traditionally, needs assessment has involved identifying knowledge, skills, abilities, and tasks. However, a current trend in training is for needs assessment to focus on competencies, especially for managerial positions. **Competencies** are sets of skills, knowledge, abilities, and personal characteristics that enable employees to perform their jobs successfully.[52]

A **competency model** identifies the competencies necessary for each job. Competency models provide descriptions of competencies that are common for an entire occupation, organization, job family, or specific job. Competency models can be used for performance management. However, one of the strengths of competency models is that they are useful for a variety of human resource (HR) practices, including recruiting, selection, training, and development. Competency models can be used to help identify the best employees to fill open positions and to serve as the foundation for development plans that allow employees and their manager to target specific strengths and development areas. The competencies included in competency models vary according to the company's business strategy and goals. They can include sales, leadership, interpersonal, technical, and other types of competencies. Competency models typically include the name of each competency, the behaviors that represent proficiency in the competency, and levels that include descriptions representing demonstrated levels of mastery or proficiency. **Table 3.9** shows the technical cluster of competencies from a competency model for a systems engineer. The left side of the table lists technical competencies within the technical cluster (such as systems architecture, data migration, and documentation). The right side shows behaviors that might be used to determine a systems engineer's level of proficiency for each competency.

TABLE 3.9 Competencies from a Competency Model

Technical Cluster	Proficiency Ratings
Systems Architecture Ability to design complex software applications, establish protocols, and create prototypes.	**0**—Is not able to perform basic tasks. **1**—Understands basic principles; can perform tasks with assistance or direction. **2**—Performs routine tasks with reliable results; works with minimal supervision. **3**—Performs complex and multiple tasks; can coach or teach others. **4**—Considered an expert in this task; can describe, teach, and lead others.
Data Migration Ability to establish the necessary platform requirements to efficiently and completely coordinate data transfer.	**0**—Is not able to perform basic tasks. **1**—Understands basic principles; can perform tasks with assistance or direction. **2**—Performs routine tasks with reliable results; works with minimal supervision. **3**—Performs complex and multiple tasks; can coach or teach others. **4**—Considered an expert in this task; can describe, teach, and lead others.
Documentation Ability to prepare comprehensive and complete documentation, including specifications, flow diagrams, process control, and budgets.	**0**—Is not able to perform basic tasks. **1**—Understands basic principles; can perform tasks with assistance or direction. **2**—Performs routine tasks with reliable results; works with minimal supervision. **3**—Performs complex and multiple tasks; can coach or teach others. **4**—Considered an expert in this task; can describe, teach, and lead others.

Source: R. J. Mirabile, "Everything You Wanted to Know About Competency Modeling," *Training and Development,* August 1997, pp. 73–77.

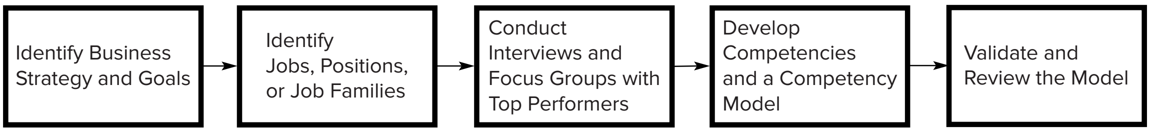
One way to understand competency models is to compare them to job analysis. As you may recall from other classes or experiences, **job analysis** refers to the process of developing a description of the job (tasks, duties, and responsibilities) and the specifications (knowledge, skills, and abilities) that an employee must have to perform it. How does job analysis compare to competency models? Job analysis is more work- and task-focused (what is accomplished), whereas competency modeling is worker-focused (how objectives are met or how work is accomplished). Focusing on "how" versus "what" provides valuable information for training and development. A recent study asked competency modeling experts (consultants, HR practitioners, academics, and industrial psychologists) to compare and contrast competency modeling and job analysis.[53] The study found several differences between job analysis and competency models. Competency models are more likely to link competencies and the company's business goals. Competency models provide descriptions of competencies that are common for an entire occupational group, level of jobs, or an entire organization. In contrast, job analysis describes what is different across jobs, occupational groups, or organization levels and generates specific knowledge, skills, and abilities for particular jobs. It is used to generate specific requirements to be used for employee selection. The competencies generated by competency modeling are more general and believed to have greater application to a wider variety of purposes, including selection, training, employee development, and performance management.

Another way to think about competency models is by considering performance management.[54] Unfortunately, many performance management systems suffer from a lack of agreement on what outcomes should be used to evaluate performance. Manager–employee discussions about performance deficiencies tend to lack specificity. By identifying the areas of personal capability that enable employees to perform their jobs successfully, competency models ensure an evaluation of what gets done and how it gets done. Performance feedback can be directed toward specific concrete examples of behavior, and knowledge, skills, ability, and other characteristics that are necessary for success are clearly described.

How are competencies identified and competency models developed? **Figure 3.5** shows the process used to develop a competency model. First, the business strategy is identified. The implications of business strategy for training were discussed in **Chapter Two**. The business strategy helps identify what types of competencies are needed to ensure that business goals are met and the company's strategy is supported. Changes in the business strategy might cause new competencies to be needed or old competencies to be altered. Second, the job or position to be analyzed is identified. Third, effective and ineffective performers are identified. Fourth, the competencies responsible for effective and ineffective performance are identified. There are several approaches for identifying competencies. These include analyzing one or several "star" performers, surveying persons who are familiar with the job (SMEs), and investigating benchmark data of good performers in other companies.[55] Fifth, the model is validated. That is, a determination is made as to whether the competencies included in the model truly are related to effective performance. In the example of the technical competencies for the systems engineer shown in **Table 3.9**, it is important to verify that (1) these three competencies are necessary for job success, and (2) the level of proficiency of the competency is appropriate.

Following the development process outlined in **Figure 3.5** will ensure that competencies and competency models are valid. However, trainers, employees, managers, and other experts should be trained (especially inexperienced raters) in how to determine accurate competency ratings. Training should ensure that raters

FIGURE 3.5 The Process Used in Developing a Competency Model



understand each competency and the differences between them and can distinguish between low, medium, and high levels of proficiency.[56]

Competency models are useful for training and development in several ways:[57]

- They identify behaviors needed for effective job performance. These models ensure that feedback given to employees as part of a development program (such as 360-degree feedback) relate specifically to individual and organizational success.
- They provide a tool for determining what skills are necessary to meet today's needs, as well as the company's future skill needs. They can be used to evaluate the relationship between the company's current training programs and present needs. That is, they help align training and development activities with the company's business goals. They can be used to evaluate how well the offerings relate to anticipated future skill needs.
- They help determine what skills are needed at different career points.
- They provide a framework for ongoing coaching and feedback to develop employees for current and future roles. By comparing their current personal competencies to those required for a job, employees can identify competencies that need development and choose actions to develop those competencies. These actions may include courses, job experiences, and other types of development. (Development methods are detailed in **Chapter Nine**, "Employee Development and Career Management.")
- They create a "road map" for identifying and developing employees who may be candidates for managerial positions (succession planning).
- They provide a common set of criteria that may be used for identifying appropriate development training and learning activities for employees, as well as for evaluating and rewarding them. This helps integrate and align the company's HR systems and practices.

For example, the talent development team at Providence St. Joseph Health recruits and develops nursing professionals in a highly competitive environment due to a nationwide nursing shortage and a high first year turnover rate.[58] To attract new talent and improve retention, the hospital system created the Nursing Institute to assess workforce and industry trends and develop strategies to address employee needs. The Nursing Institute is working to ensure all new employees meet important benchmarks in a systematic manner. To do so, the talent development team has developed a standardized competency assessment form for new graduate registered nurses. Previously each hospital across the Providence St. Joseph system had been managing competencies individually, with great variation across the system and among specialties. The new standardized process assesses nurses in 14 areas and is intended for use by a registered nurse's supervisor. The tool can also be used to define goals and demonstrate level of development of each competency during a nurse's orientation period.

Table 3.10 shows the competency model used by Voya Financial, a company that specializes in retirement planning and investment.[59] These competencies are used in performance management to assess how employees achieved their results and serve as the basis for the company's leadership development programs. To use competency models effectively for performance evaluation, they must be up to date, drive business performance, be job-related (valid), be relevant (or customized) for all of the company's business units, and provide sufficient detail to make an accurate assessment of employees' performance.

TABLE 3.10 Examples of Competencies at Voya Financial

Demonstrate Integrity
Focus on the Customer
Build a Strong Organization

continued

Create & Lead Change
Deliver Results
Excel at Execution
Lead with Passion & Clarity
Develop People & Self
Work as One Company

Source: From "Voya's Leadership Model," Voya, from www.voya.com/page/why-voya, accessed February 2, 2021.

Scope of Needs Assessment

Up to this point, the chapter has discussed the various aspects of needs assessment, including organizational, person, and task analyses. This involves interviews, observations, and potentially even surveying employees. You might be saying to yourself, "This sounds good, but it appears to be a very elaborate process that takes time. What happens if I don't have time to conduct a thorough needs assessment? Should I abandon the process?"

Needs assessment is often skipped for several reasons based on assumptions such as training is always the issue or is mandated; it's too costly, takes too long, and is too complex; and managers will not cooperate. Despite the constraints to conducting a needs assessment, it is necessary to determine if a problem or pressure point exists and to identify the best solution, which could be training.

However, even if managers demand a training course right now, needs assessment should still be conducted. There are several ways to conduct a rapid needs assessment. A **rapid needs assessment** refers to a needs assessment that is done quickly and accurately, but without sacrificing the quality of the process or the outcomes.[60] The key to conducting a rapid needs assessment is choosing the needs assessment methods that will provide the results you can have the greatest confidences in while using the fewest resources (i.e., time, money, SMEs). There are several ways to conduct a rapid needs assessment. First, the scope of needs assessment depends on the size of the potential pressure point. If the pressure point seems to be local and has a potentially small impact on the business, then the information-gathering part of needs assessment could consist of only a few interviews with managers or job incumbents. If the pressure point will have a large impact on the business, then more information gathering should be conducted. If, after interviewing SMEs and job incumbents, you can tell that you are not learning anything new about the job, then interviewing could be stopped. Second, consider using already available data collected for other purposes. Error data, sales data, customer complaints, and exit interviews might provide valuable clues as to the source of performance and survey problems. JetBlue uses on-the-job performance data and business results data to identify training needs.[61] For example, using data collected when aircraft are regularly serviced, JetBlue found that there was an increase in cosmetic damage to airplanes. This triggered the learning team to conduct more in-depth assessment to identify potential learning needs that may have resulted in an increase in the damage rate over time. Customer complaints tracked by the U.S. Transportation Department revealed an increase in problems experienced by JetBlue's disabled passengers before boarding. Based on these data, training was revised and expanded, resulting in fewer complaints. The web may be another useful source for quickly conducting interviews and surveys with SMEs in different locations. Finally, if you are attuned to the business problems, technological developments, and other issues facing the organization, you will be able to anticipate training needs. For example, if the company is opening sales offices in an international location and introducing new technology in the manufacturing plants, cross-cultural training and training designed to help employees use the new technology undoubtedly will be needed. Be prepared by understanding the business.

Needs Assessment in Practice

KLA-Tencor supplies process controls and equipment to the semiconductor industry.[62] KLA-Tencor service engineers diagnose and repair complex machines that use advanced laser, optical, and robotic technologies. The engineers need to maintain proficiency in their current skills as well as add new skills to keep pace with new technology used in the company's equipment. This is critical for KLA-Tencor to quickly solve equipment problems, which, if unresolved, can result in millions of dollars of lost revenue for its customers. Providing effective service is critical for the company to keep current customers and develop new business. In fact, one of the company's values is "Indispensable" (the other values are "Perseverance," "Drive to Be Better," "High Performance Teams," and "Honest, Forthright and Consistent").

KLA-Tencor uses a skill management process (the Right People, Right Knowledge process) to monitor its workforce skills and uses this information to change its training programs. The process involves developing a task list, training on the task, practicing on-the-job training to gain certification, and conducting an annual skills assessment. To conduct the skills assessment, a survey was sent to all of KLA-Tencor's more than 1,000 service engineers. For each task, the engineers were asked to rate their capability of doing the task on a scale from "I don't know how" to "I can teach it to others." Also, they were asked to evaluate how frequently they performed the task, from "Never" to "More than two times per year." Based on their responses, they were assigned a training task. More than 200 courses were created to train the engineers. To ensure that the training was completed, both engineers and their managers were held accountable. This helped achieve a 95 percent completion rate within one year after training was assigned. The skills assessment data were also used to identify gaps in current training, resulting in more than 2,000 changes in courses and certification programs. The skills assessment is done annually to ensure that service engineers keep up to date with new technology and products.

This example illustrates several aspects of the needs assessment process. First, training was viewed as critical for helping the company meet its strategic objectives. As a result, resources and time were allocated for needs assessment and training. Second, the needs assessment included a task or skill assessment that helped determine who needed training and what tasks they needed to learn. Third, based on the needs assessment, training programs were developed or changed to improve the identified skill deficiencies.

Summary

The first step in a successful training effort is to determine that a training need exists through a process known as needs assessment. Needs assessment involves three steps: organizational analysis, person analysis, and task analysis. Various methods—including observation, interviews, and surveys or questionnaires—are used to conduct a needs assessment. Each has advantages and disadvantages. Organizational analysis involves determining (1) the extent to which training is congruent with the company's business strategy and resources and (2) if peers and managers are likely to provide the support needed for trainees to use training content in the work setting.

Person analysis focuses on identifying whether there is evidence that training is the solution, who needs training, and whether employees have the prerequisite skills, attitudes, and beliefs needed to ensure that they master the content of training programs. Because performance problems are one of the major reasons that companies consider training for employees, it is important to investigate how personal characteristics, input, output, consequences, and feedback relate to performance and learning. Managers and trainers need to be concerned about employees' basic skill levels, attitudes, age and generation, and the work environment in determining if performance problems can be solved using training and how training should be designed.

Training is likely the best solution to a performance problem if employees don't know how to perform. If employees have not received feedback about their performance, if they lack the equipment needed to perform the job, if the consequences for good performance are negative, or if they are unaware of an expected standard for performance, then training is not likely to be the best solution.

To maximize employees' motivation to learn in training programs, managers and trainers need to understand these factors prior to sending employees to training. For example, lack of basic skills or reading skills can inhibit both job performance and learning.

A task analysis involves identifying the task and the training that employees will require in terms of knowledge, skills, and abilities. Competency modeling is a new approach to needs assessment that focuses on identifying personal capabilities, including knowledge, skills, attitudes, values, and personal characteristics.

Key Terms

needs assessment *113*
organizational analysis *113*
person analysis *113*
task analysis *113*
stakeholders *115*
learning council *116*
subject-matter expert (SME) *117*
job incumbent *117*
focus group *119*
crowdsourcing *119*
benchmarking *121*
gap analysis *124*
readiness for training *124*
person characteristics *124*
input *124*
output *124*
consequences *124*
feedback *124*
motivation to learn *126*
basic skills *126*
cognitive ability *127*
readability *128*
self-efficacy *129*
situational constraints *130*
social support *130*
norms *131*
root cause analysis *132*
job *133*
task *133*
knowledge *133*
skill *133*
ability *133*
other *133*
competencies *138*
competency model *138*
job analysis *140*
rapid needs assessment *142*

Discussion Questions

1. Which of the factors that influence performance and learning do you think is most important? Which is least important?
2. If you had to conduct a needs assessment for a new job at a new plant, describe the method you would use.
3. If you were going to use technology to identify training needs for customer service representatives for an e-commerce clothing company, what steps would you take to ensure that the technology was not threatening to employees?
4. Needs assessment involves organization, person, and task analyses. Which one of these analyses do you believe is most important? Which is least important? Why?

5. Why should upper-level managers be included in the needs assessment process?
6. Explain how you would determine if employees had the reading level necessary to succeed in a training program. How would you determine if employees had the necessary computer skills needed to use an online training program?
7. What conditions would suggest that a company should buy a training program from an outside vendor? Which would suggest that the firm should develop the program itself?
8. Assume that you have to prepare older employees with little computer experience to attend a training course on how to use the Internet. How will you ensure that they have high levels of readiness for training? How will you determine their readiness for training?
9. Explain the process you would use to conduct a root cause analysis of a performance problem.
10. Review the sample tasks and task ratings for the electronic technician's job shown next. What tasks do you believe should be emphasized in the training program? Why?

Task	Importance	Frequency	Learning Difficulty
1. Replaces components	1	2	1
2. Repairs equipment	2	5	5
3. Interprets instrument readings	1	4	5
4. Uses small tools	2	5	1

Explanation of ratings:

Frequency: 1 = very infrequently to 5 = very frequently

Importance: 1 = very important to 5 = very unimportant

Learning difficulty: 1 = easy to 5 = very difficult

11. Why would we consider age and generational differences as part of a needs assessment? Is this important? Explain.
12. Discuss the types of evidence that you would look for to determine whether a needs analysis has been conducted improperly.
13. How is competency modeling similar to traditional needs assessment? How does it differ?
14. What is a rapid needs assessment? How would you conduct a rapid needs assessment so that it is valuable and accurately identifies training needs?

Application Assignments

1. Develop a competency model for a job held by a friend, spouse, or roommate (someone other than yourself). Use the process discussed in this chapter to develop your model. Note the most difficult part of developing the model. How could the model be used?
2. The Department of Social Services represents a large portion of your county's budget and total number of employees. The job of eligibility technician is responsible for all client contact, policy interpretation, and financial decisions related to several forms of public aid (e.g., food stamps, aid to families with dependent children). Eligibility technicians must read a large number of memos and announcements of new and revised policies and procedures. Eligibility technicians were complaining that they had

difficulty reading and responding to this correspondence. The county decided to send the employees to a speed reading program costing $500 per person. The county has 200 eligibility technicians. Preliminary evaluation of the speed reading program was that trainees liked it. Two months after the training was conducted, the technicians told their managers that they were not using the speed reading course in their jobs, but were using it in leisure reading at home. When their managers asked why they weren't using it on the job, the typical response was, "I never read those memos and policy announcements anyway."

a. Evaluate the needs assessment process used to determine that speed reading was necessary. What was good about it? Where was it faulty?

b. How would you have conducted the needs assessment? Be realistic.

3. Consider the interview questions for the lead drivers that are shown on page 133. Write questions that could be used to interview the six lead driver supervisors and the two regional vice presidents. How do these questions differ from those for the lead drivers? How are they similar?
4. Several companies are known for linking their mission, values, and HR practices in ways that have led to business success as well as employee satisfaction. These companies include Southwest Airlines (www.iflyswa.com), Cisco Systems (www.cisco.com), SAS Institute (www.sas.com), Verizon (www.verizon.com), Container Store (www.containerstore.com), Google (www.google.com), Steelcase (www.steelcase.com), Whole Foods (www.wholefoods.com), and TELUS (www.telus.com). Choose one of these companies' websites and reviews of the companies at www.glassdoor.com and perform an organizational needs analysis. Read about the company's values and vision; look for statements about the importance of training and personal development. Is training important in the company? Why or why not? Provide supporting evidence.
5. Go to www.careeronestop.org/CompetencyModel, the website for CareerOneStop, sponsored by the U.S. Department of Labor, Employment and Training Administration to help job seekers, students, businesses, and career professionals. Choose and review one of the industry competency models. How might this competency model be useful for training and development for companies within the industry you selected? For their employees? For individuals such as students or the unemployed interested in working in the industry?
6. ConocoPhillips finds and produces oil and natural gas. Go to www.conocophillips.com. Click on "Careers." Under "Career Development," click on "Leadership Competencies." Review the competencies. How could these competencies be used in the learning and development of new and aspiring company leaders and managers?
7. O*NET is the primary source of occupational information in the United States. The O*NET database includes information on skills, abilities, knowledge, work activities, interests, and more. Go to www.onetonline.org. Click on "Find Occupations" and choose an occupation that interests you. Review the information provided for the occupation. How could this information be used for training needs assessment?
8. Go to www.designingdigitally.com, the website for Designing Digitally, a company that provides custom training solutions. Under "What We Do," click on "Training Needs Analysis." Read the information provided. What role does needs analysis have at Designing Digitally? How does needs assessment help Designing Digitally develop training that is best for its clients? What questions might Designing Digitally ask about the organization in its needs analysis?

Case: *Identifying Training Needs at the U.S. Department of Agriculture's Animal Plant and Health Inspection Service (APHIS)*

APHIS created an innovative training program to keep supervisors up to date and motivated. The Experienced Supervisor Applied Workshop directs managers to focus on the spirit and practice of effective management as well as current policy changes. The purpose of the program was to provide in-person training that would meet the organization's mandatory supervisory training requirement. The training focused on how to mentor employees, improve employee performance and productivity, conduct performance appraisals, and deal with unacceptable performance. To help ensure that this new training program met the organization's needs, the planning team conducted interviews with supervisors who had at least two years of management experience in the agency to determine what kind of training would be most helpful to them. The team also met with subject-matter experts to determine where they saw the biggest need for improvement. Also, the planning team analyzed participant feedback from an already existing training program for new supervisors.

In addition to the interviews, meetings with subject-matter experts, and analysis of participant feedback from an existing training program, what else could APHIS have done to conduct the needs assessment? Describe the method, why you would recommend it, and who would be involved. Would you recommend your method replace or be used in addition to the methods already in use? Explain.

Source: Based on B. Epstein and M. Schweitzer, "Not Your Ordinary Government Training," *T+D,* July 2000, pp. 56–61.

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CHAPTER FOUR

Learning and Transfer of Training

Objectives

After reading this chapter, you should be able to

4-1 Discuss the five types of learner outcomes.
4-2 Explain the implications of learning theory for instructional design.
4-3 Incorporate adult learning theory into the design of a training program.
4-4 Describe how learners receive, process, store, retrieve, and act upon information.
4-5 Discuss the internal conditions (within the learner) and external conditions (learning environment) necessary for the trainee to learn each type of capability.
4-6 Discuss the implications of open and closed skills and near and far transfer for designing training programs.
4-7 Explain the features of instruction and the work environment that are necessary for learning and transfer of training.

Energizing Training Means Better Learning and Transfer of Training

Boring lectures, lack of meaningful content in e-learning, training that doesn't give employees the opportunity to practice and receive feedback, training that takes too long to complete—all demotivate trainees and make it difficult for them to learn and use what they have learned on the job. However, many companies are using innovative instructional methods to make training more interesting and accessible to help trainees learn and apply it to their work.

Panda Restaurant Group, the largest family-owned and operated restaurant group in the United States (you may be familiar with Panda Express, Panda Inn, or Hibachi-San), has more than 2,000 stores, 1,800 managers, and 40,000 associates. The company wants to grow to 10,000 stores but in a way that supports its mission, "To deliver exceptional Asian dining experiences by building an organization where people are inspired to build better lives." To do so and support one of the company's core values, "Great Operations," Panda invests in training. To ensure that training programs help associates learn, they are designed to engage associates and provide them with the opportunity to interact with fellow trainees as well as the training content. As a result, Panda use a variety of training methods including instructor-led training, videos, e-learning, and on-the-job training.

The talent development team at BMO, a financial services company, launched a new mobile, anywhere, anytime learning platform and immediately saw increased employee participation in learning. The learning platform offers chunks of high-quality content including podcasts, articles, videos, e-books, and a range of online courses. The company reports that employees like the variety of resources and the ease of fitting learning into their busy schedules.

Veeam, a company that sells software and cloud computing solutions, trains new sales employees using a combination of classroom training, on the job experience through shadowing more experienced sales persons, role-plays, and online courses.

The success of Embark and Barista Essentials relies on both formal training and practical experience. Union Market's training lab is the formal environment where baristas learn the basics. But it is in the cafés, where baristas spend extended time at either the pour-over or espresso station, that they can learn a technique. In the training lab, a café team of baristas, a lead barista, and a café leader work together to learn pour-over, espresso, and milk skills. Back in the cafés, the same team adapts quickly to multitasking under pressure, making every beverage to order without a trainer's guidance.

Sources: Based on J. Sun and D. Pena, "How Panda Restaurant Group, Inc., Invests in Its People," *training,* October 2019, pp. 50–51; "Our Culture," Panda Restaurant Group, from www.pandacareer.com, accessed January 15, 2021; S. Castello, "Digital Transformation Starts with People," *T+D,* October 2019, pp. 39–40; "Top 125 2020 Rankings 96–100: Veeam," *training,* March/April 2020, p. 68; J. Washburn, "Training Baristas from the Ground(s) Up," *T+D,* January 2019, pp. 23–25.

Introduction

Although they use different methods, the purpose of the training at the companies just described is to help employees learn so they can perform their jobs successfully. Regardless of the training method, certain conditions must be present for learning to occur and for employees to use what they have learned on the job. These include (1) providing opportunities for trainees to practice and receive feedback (i.e., information about how well people are meeting the training objectives), (2) offering meaningful training content, (3) identifying any prerequisites that trainees need to complete the program successfully, (4) allowing trainees to learn through observation and experience, and (5) ensuring that the work environment, including managers and peers, supports learning and the use of learned skills on the job. For example, feedback from trainers is provided during the role plays used by Veeam. The meaningfulness of what is being learned is enhanced at Union Market by having learners work on equipment that is identical to what they will use on the job. BMO provides training content to match trainees' preferences about how they want to learn.

As you may have recognized by now, this chapter emphasizes not only what has to occur during training sessions for learning to occur, but also how to ensure that trainees use what they have learned on the job. That is, this chapter discusses both learning and transfer of training. **Learning** refers to a relatively permanent change in human capabilities that can include knowledge, skills, attitudes, behaviors, and competencies that are not the result of growth processes.[1] A key part of learning is that trainees commit to memory (i.e., remember) what they have learned and recall it. **Transfer of training** refers to trainees effectively and continually applying what they have learned in training to their jobs.[2] As the organizations in the chapter opener illustrate, trainee characteristics, the design of the training program (or what occurs during training), and the work environment influence whether trainees learn and use or apply what they have learned to their jobs. **Figure 4.1** presents a model of learning and transfer of training. As the model shows, transfer of training includes both the generalization of training to the job and maintenance of learned material. **Generalization** refers to a trainee's ability to apply what has been learned to on-the-job work problems and situations that are similar but not necessarily identical to those problems and situations encountered in the learning environment (i.e., the training program). **Maintenance** refers to the process of trainees continuing to use what they have learned over time.

It is important to realize that for training to be effective, both learning and transfer of training are needed. Trainees can fail or incorrectly apply training content (what was emphasized in training) to their jobs, either because the training was not conducive to learning, or the work environment does not provide them with the opportunity to use training content or fails to support its correct use, or both. Also, it is a mistake to consider transfer of training as something to be concerned about after training because it deals with the use of training content on the job. Instead, transfer of training should be considered during the design or purchase of training. If you wait until after training to consider transfer of training, it is likely too late. Trainees' perceptions of the work environment and its support for training have likely influenced their motivation to learn and what, if anything, they have learned (recall the discussion of motivation to learn in **Chapter Three**, "Needs Assessment").

This chapter coverage is based on the model shown in **Figure 4.1**. First, we discuss learning. We begin by identifying what is to be learned—that is, the learning outcomes. Learning outcomes should be related to what is required to perform the job successfully. As the chapter opener illustrates, this may include selling products, providing services, working with operating systems, or developing and fixing software. As a student, you are familiar with one type of learning outcome: intellectual skills. We also discuss how trainees' learning style may influence the way they prefer to learn. The influence of other trainee characteristics—such as basic skills, cognitive ability, self-efficacy, age, and interests—on motivation to learn and learning was discussed in **Chapter Three**.

Next, we consider training design. Training design includes consideration of how to create a learning environment that will help the trainee acquire the learning outcomes. We discuss various learning and transfer of training theories. Last, we look at how these theories are used to create a learning environment and supportive work environment designed to help the trainee learn the desired outcomes and apply them on the job.

What Is Learning? What Is Learned?

Understanding learning outcomes is crucial because they influence the characteristics of the training environment that are necessary for learning to occur. For example, if trainees are to master motor skills such as climbing a pole, they must have opportunities to practice climbing and receive feedback about their climbing skills. Learning outcomes are presented in **Table 4.1**.

FIGURE 4.1 A Model of Learning and Transfer of Training

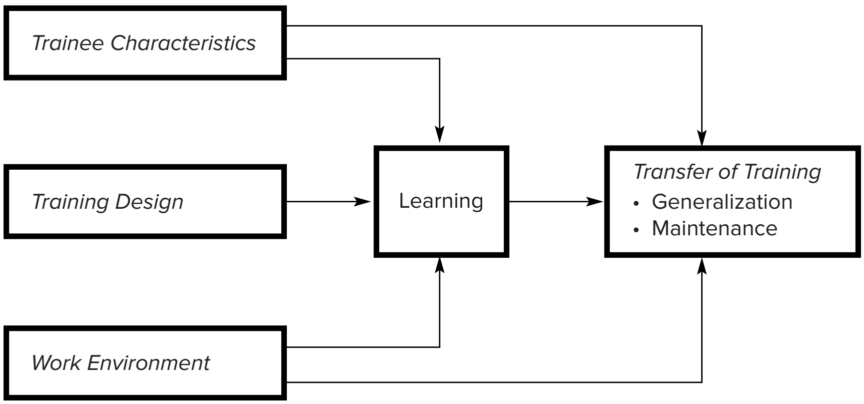


TABLE 4.1 Learning Outcomes

Type of Learning Outcome	Description of Capability	Example
Verbal information	State, tell, or describe previously stored information.	State three reasons for following company safety procedures.
Intellectual skills	Apply generalizable concepts and rules to solve problems and generate novel products.	Design and code a computer program that meets customer requirements.
Motor skills	Execute a physical action with precision and timing.	Shoot a gun and consistently hit a small moving target.
Attitudes	Choose a personal course of action.	Choose to respond to all incoming mail within 24 hours.
Cognitive strategies	Manage one's own thinking and learning processes.	Use three different strategies selectively to diagnose engine malfunctions.

Sources: Based on R. Gagne and K. Medsker, *The Conditions of Learning* (New York: Harcourt-Brace, 1996); K. Kapp, "Matching the Right Design Strategy to the Right Content," *T+D,* July 2011, pp. 48–52.

Verbal information includes names or labels, facts, and bodies of knowledge. Verbal information includes specialized knowledge that employees need in their jobs. For example, a manager must know the names of different types of equipment as well as the body of knowledge related to Total Quality Management (TQM).

Intellectual skills include concepts and rules, which are critical to solve problems, serve customers, and create products. For example, a manager must know the steps in the performance appraisal process (e.g., gather data, summarize data, or prepare for an appraisal interview with an employee) in order to conduct an employee appraisal.

Motor skills include coordination of physical movements. For example, a telephone repair person must have the coordination and dexterity required to climb ladders and telephone poles.

Attitudes are a combination of beliefs and feelings that predispose a person to behave a certain way. Attitudes include a cognitive component (beliefs), an affective component (feeling), and an intentional component (the way a person intends to behave with regard to the focus of the attitude). Important work-related attitudes include job satisfaction, commitment to the organization, and job involvement. Suppose you say that an employee has a "positive attitude" toward her work. This means the person likes her job (the affective component). She may like her job because it is challenging and provides an opportunity to meet people (the cognitive component). Because she likes her job, she intends to stay with the company and do her best at work (the intentional component). Training programs may be used to develop or change attitudes because attitudes have been shown to be related to physical and mental withdrawal from work, turnover, and behaviors that affect the well-being of the company (e.g., helping new employees).

Cognitive strategies regulate the processes of learning. They relate to the learner's decision regarding what information to attend to (i.e., pay attention to), how to remember information, and how to solve problems. For example, a physicist recalls the colors of the light spectrum through remembering the name "Roy G. Biv" (red, orange, yellow, green, blue, indigo, violet).

As this chapter points out, each learning outcome requires a different set of conditions for learning to occur. Before this chapter investigates the learning process in detail, it looks at the theories that help explain how people learn.

Learning Theories

Each theory about how people learn relates to different aspects of the learning process. Many of the theories also relate to trainees' motivation to learn, which was discussed in **Chapter Three**. The application of these theories for instruction and program design are discussed later in this chapter and also in **Chapter Five**, "Program Design."

Reinforcement Theory

Reinforcement theory emphasizes that people are motivated to perform or avoid certain behaviors because of past outcomes that have resulted from those behaviors.[3] There are several processes in reinforcement theory. *Positive reinforcement* is a pleasurable outcome resulting from a behavior. *Negative reinforcement* is the removal of an unpleasant outcome. For example, consider a machine that makes screeching and grinding noises unless the operator holds levers in a certain position. The operator will learn to hold the levers in that position to avoid the noises. The process of withdrawing positive or negative reinforcers to eliminate a behavior is known as *extinction*. *Punishment* is presenting an unpleasant outcome after a behavior, leading to a decrease in that behavior. For example, if a manager yells at employees when they are late, they may avoid the yelling by being on time (but they may also call in sick, quit, or fool the boss into not noticing when they arrive late).

From a training perspective, reinforcement theory suggests that for learners to acquire knowledge, change behavior, or modify skills, the trainer needs to identify what outcomes the learner finds most positive (and negative). Trainers then need to link these outcomes to learners' acquiring knowledge or skills or changing behaviors. As was mentioned in **Chapter Three**, learners can obtain several types of benefits from participating in training programs. The benefits may include learning an easier or more interesting way to perform their job (job-related), meeting other employees who can serve as resources when problems occur (personal), or increasing opportunities to consider new positions in the company (career-related). According to reinforcement theory, trainers can withhold or provide these benefits to learners who master program content. The effectiveness of learning depends on the pattern or schedule for providing these reinforcers or benefits. Similarly, managers can provide these benefits to help ensure transfer of training.

Behavior modification is a training method that is primarily based on reinforcement theory. For example, a training program in a bakery focused on eliminating unsafe behaviors such as climbing over conveyor belts (rather than walking around them) and sticking hands into equipment to dislodge jammed materials without turning off the equipment.[4] Employees were shown slides depicting safe and unsafe work behaviors. After viewing the slides, employees were shown a graph of the number of times that safe behaviors were observed during past weeks. Employees were encouraged to increase the number of safe behaviors they demonstrated on the job. They were given several reasons for doing so: for their own protection, to decrease costs for the company, and to help their plant get out of last place in the safety rankings of the company's plants. Immediately after the training, safety reminders were posted in employees' work areas. Data about the number of safe behaviors performed by employees continued to be collected and displayed on the graph in the work area following the training. Employees' supervisors were also instructed to recognize workers whenever they saw them performing a safe work behavior. In this example, the safe-behavior data posted in the work areas and supervisors' recognition of safe work behaviors represent positive reinforcers.

Social Learning Theory

Social learning theory emphasizes that people learn by observing other people (models) who they believe are credible and knowledgeable.[5] Social learning theory also recognizes that behavior that is reinforced or rewarded tends to be repeated. The models' behavior or skill that is rewarded is adopted by the observer. According to social learning theory, learning new skills or behaviors comes from (1) directly experiencing the consequences of using that behavior or skill, or (2) the process of observing others and seeing the consequences of their behavior.[6]

According to social learning theory, learning also is influenced by a person's self-efficacy. **Self-efficacy** is a person's judgment about whether he or she can successfully learn knowledge and skills. **Chapter Three** emphasizes self-efficacy as an important factor to consider in the person analysis phase of needs assessment. Why? Self-efficacy is one determinant of readiness to learn. A trainee with high self-efficacy will make efforts to learn in a training program and will be most likely to persist in learning even if an environment is not conducive to learning (e.g., a noisy training room). In contrast, a person with low self-efficacy will have self-doubts about mastering the content of a training program and will be more likely to withdraw psychologically and/or physically (e.g., daydream or fail to attend the program). These persons believe that they are unable to learn and that, regardless of their effort level, they will be unable to learn.

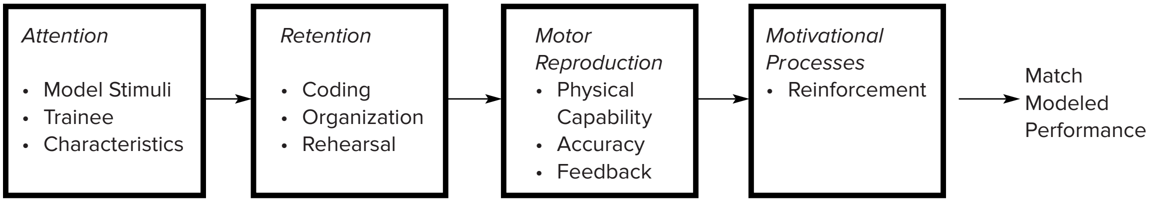
A person's self-efficacy can be increased using several methods: verbal persuasion, logical verification, observation of others (modeling), and past accomplishments.[7] **Verbal persuasion** means offering words of encouragement to convince others they can learn. **Logical verification** involves perceiving a relationship between a new task and a task already mastered. Trainers and managers can remind employees when they encounter learning difficulties that they have been successful at learning similar tasks. **Modeling** involves having employees who already have mastered the learning outcomes demonstrate them for trainees. As a result, employees are likely to be motivated by the confidence and success of their peers. **Past accomplishments** refers to allowing employees to build a history of successful accomplishments. Managers can place employees in situations where they are likely to succeed and provide training so that employees know what to do and how to do it.

Social learning theory suggests that four processes are involved in learning: attention, retention, motor reproduction, and motivational processes (see **Figure 4.2**).

Attention suggests that persons cannot learn by observation unless they are aware of the important aspects of a model's performance. Attention is influenced by characteristics of the model and the learner. Learners must be aware of the skills or behavior they are supposed to observe. The model must be clearly identified and credible. The learner must have the physical capability (sensory capability) to observe the model. Also, a learner who has successfully learned other skills or behavior by observing the model is more likely to attend to the model.

Learners must remember the behaviors or skills that they observe. This is the role of *retention*. Learners have to code the observed behavior and skills in memory in an organized manner so they can recall them for the appropriate situation. Behaviors or skills can be coded as visual images (symbols) or verbal statements.

FIGURE 4.2 Processes of Social Learning Theory



Sources: Based on A. Bandura, *Social Foundations of Thoughts and Actions* (Englewood Cliffs, NJ: Prentice Hall, 1986); P. Taylor, D. Russ-Eft, and D. Chan, "A Meta-Analytic Review of Behavior Modeling Training," *Journal of Applied Psychology* 90 (2005), pp. 692–709.

Motor reproduction involves trying out the observed behaviors to see if they result in the same reinforcement that the model received. The ability to reproduce the behaviors or skills depends on the extent to which the learner can recall the skills or behavior. The learner must also have the physical capability to perform the behavior or exhibit the skill. For example, a firefighter can learn the behaviors necessary to carry a person away from a dangerous situation, but may be unable to demonstrate the behavior because of a lack of upper body strength. Note that performance of behavior is usually not perfect on the first attempt. Learners must have the opportunity to practice and receive feedback to modify their behavior to be similar to the model behavior.

Learners are more likely to adopt a modeled behavior if it results in positive outcomes. Social learning theory emphasizes that behaviors that are reinforced (a *motivational process*) will be repeated in the future. For example, a major source of conflict and stress for managers often relates to the performance appraisal interview. A manager may, through observing successful managers, learn behaviors that allow employees to be more participative in a performance appraisal interview (e.g., give employees the opportunity to voice their concerns). If the manager uses this behavior in the performance appraisal interview and the behavior is rewarded by employees (e.g., they make comments such as, "I really felt the feedback meeting was the best we have ever had") or the new behavior leads to reduced conflicts with employees (negative reinforcement), the manager will be more likely to use this behavior in subsequent appraisal interviews.

As you will see in the discussion of training methods in **Chapters Seven**, "Traditional Training Methods," and **Eight**, "Technology-Based Training Methods," social learning theory is the primary basis for behavior modeling training and has influenced how models are used in videos, which can be part of face-to-face, online, or mobile training programs. For example, to train customer-facing employees about its new pricing plans, Verizon used videos showing the best way to talk to customers.[8]

Goal Theories

Goal Setting Theory

Goal setting theory assumes that behavior results from a person's conscious goals and intentions.[9] Goals influence a person's behavior by directing energy and attention, sustaining effort over time, and motivating the person to develop strategies for goal attainment.[10] Research suggests that specific, challenging goals result in better performance than vague, unchallenging goals.[11] Goals have been shown to lead to high performance only if people are committed to the goal. Employees are less likely to be committed to a goal if they believe that it is too difficult.

An example of how goal setting theory influences training methods is seen in a program designed to improve pizza deliverers' driving practices.[12] The majority of pizza deliverers are young (ages 18–24) and inexperienced drivers, who are compensated based on the number of pizzas they can deliver. This creates a situation in which deliverers are rewarded for fast but unsafe driving practices—for example, not wearing a safety belt, failing to use turn signals, and not coming to complete stops at intersections. These unsafe practices have resulted in a high driving accident rate.

Prior to goal setting, pizza deliverers were observed by their managers leaving the store and then returning from deliveries. The managers observed the number of complete stops at intersections over a one-week period. In the training session, managers and trainers presented the deliverers with a series of questions for discussion, such as: In what situations should you come to a complete stop? What are the reasons for coming to a complete stop? What are the reasons for not coming to a complete stop?

After the discussion, pizza deliverers were asked to agree on the need to come to a complete stop at intersections. Following the deliverers' agreement, the managers shared the data they collected regarding the number of complete stops at intersections they had observed the previous week. (Complete stops were made

55 percent of the time.) The trainer asked the pizza deliverers to set a goal for complete stopping over the next month. They decided on a goal of 75 percent complete stops.

After the goal setting session, managers at each store continued observing their drivers' intersection stops. The following month in the work area, a poster showed the percentages of complete stops for every four-day period. The current percentage of total complete stops was also displayed.

Goal setting theory is also used in training program design. Goal setting theory suggests that learning can be facilitated by providing trainees with specific challenging goals and objectives. Specifically, the influence of goal setting theory can be seen in the development of training lesson plans. Lesson plans begin with specific goals, providing information regarding the expected action that the learner will demonstrate, conditions under which learning will occur, and the level of performance that will be judged acceptable. Goals can also be part of action plans or application assignments that are used to motivate trainees to transfer training.

Goal Orientation

Goal orientation refers to the goals held by a trainee in a learning situation. Goal orientation can include a learning orientation or a performance orientation. **Learning orientation** relates to trying to increase one's ability or competence in a task. People with a learning orientation believe that training success is defined as showing improvement and making progress; prefer trainers who are more interested in how trainees are learning than in how they are performing; and view errors and mistakes as part of the learning process. **Performance orientation** refers to learners who focus on task performance and how they compare to others. Persons with a performance orientation define success as high performance relative to others; value high ability more than learning; and find that errors and mistakes cause anxiety and want to avoid them.

Goal orientation is believed to affect the amount of effort that a trainee will expend in learning (motivation to learn). Learners with a high learning orientation will direct greater attention to the task and learn for the sake of learning, as opposed to learners with a performance orientation. Learners with a performance orientation will direct more attention to performing well and less effort to learning. Research has shown that trainees with a learning orientation exert greater effort to learn and use more complex learning strategies than do trainees with a performance orientation.[13] There are several ways to create a learning orientation in trainees.[14] These include setting goals around learning and experimenting with new ways of having trainees perform trained tasks rather than emphasizing trained-task performance; deemphasizing competition among trainees; creating a community of learning (discussed later in the chapter); and allowing trainees to make errors and to experiment with new knowledge, skills, and behaviors during training.

Need Theories

Need theories help explain the value that a person places on certain outcomes. A **need** is a deficiency that a person is experiencing at any point in time. A need motivates a person to behave in a manner that satisfies the deficiency. The need theories of Abraham Maslow and Clayton Alderfer focused on physiological needs, relatedness needs (the need to interact with other persons), and growth needs (self-esteem and self-actualization).[15] Both Maslow and Alderfer believed that persons begin by trying to satisfy needs at the lowest level and then progress up the hierarchy as lower-level needs are satisfied. That is, if physiological needs are not met, a person's behavior will continue to focus on satisfying these needs before relatedness or growth needs receive attention. The major difference between Alderfer's and Maslow's needs hierarchies is that Alderfer allows the possibility that if higher-level needs are not satisfied, employees may refocus on lower-level needs.

David McClelland's need theory focused primarily on needs for achievement, affiliation, and power.[16] According to McClelland, these needs can be learned. The need for achievement relates to a concern for attaining and maintaining self-set standards of excellence. The need for affiliation involves concern for building and maintaining relationships with other people and for being accepted by others. The need for power is a concern for obtaining responsibility, influence, and reputation.

Need theories suggest that to motivate learning, trainers should identify trainees' needs and communicate how training program content relates to fulfilling these needs. Also, if certain basic needs of trainees (e.g., physiological and safety needs) are not met, they are unlikely to be motivated to learn. For example, consider a budgeting software training class for secretaries in a company that is downsizing. It is doubtful that even the best-designed training class will result in learning if employees believe that their job security is threatened (unmet need for security) by the company's downsizing strategy. Also, it is unlikely the secretaries will be motivated to learn if they believe that the budgeting skills emphasized in the program will not help them keep their current employment or increase their chances of finding another job inside (or even outside) the company.

Another implication of need theory relates to providing employees with a choice of training programs to attend. As mentioned in **Chapter Three**, giving employees a choice of which training course to attend can increase their motivation to learn. This occurs because trainees are able to choose programs that best match their needs.

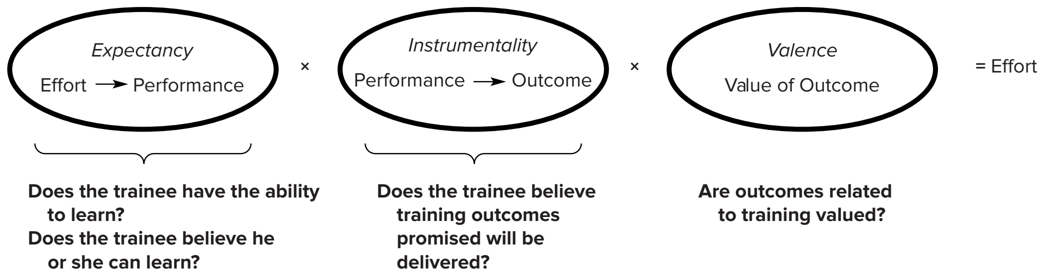
Expectancy Theory

Expectancy theory suggests that a person's behavior is based on three factors: expectancy, instrumentality, and valence.[17] Beliefs about the link between trying to perform a behavior and actually performing well are called **expectancies**. Expectancy is similar to self-efficacy. In expectancy theory, a belief that performing a given behavior (e.g., attending a training program) is associated with a particular outcome (e.g., being able to better perform your job) is called **instrumentality**. **Valence** is the value that a person places on an outcome (e.g., how important it is to perform better on the job).

According to expectancy theory, various choices of behavior are evaluated according to their expectancy, instrumentality, and valence. **Figure 4.3** shows how behavior is determined based on finding the mathematical product of expectancy, instrumentality, and valence. People choose the behavior with the highest value.

From a training perspective, expectancy theory suggests that learning is most likely to occur when employees believe that they can learn the content of the program (expectancy). Also, learning and transfer of training are enhanced when they are linked to outcomes such as better job performance, a salary increase, or peer recognition (instrumentality), and when employees value these outcomes (valence).

FIGURE 4.3 Expectancy Theory of Motivation



Adult Learning Theory

Adult learning theory was developed out of a need for a specific theory of how adults learn. Most educational theories, as well as formal educational institutions, have been developed exclusively to educate children and youths. Pedagogy, the art and science of teaching children, has dominated educational theory. Pedagogy gives the instructor the major responsibility for making decisions about learning content, method, and evaluation. Students are generally seen as (1) being passive recipients of directions and content and (2) bringing few experiences that may serve as resources to the learning environment.[18]

Educational psychologists, recognizing the limitations of formal education theories, developed **andragogy**, the theory of adult learning. Malcolm Knowles is most frequently associated with adult learning theory. Knowles's model is based on several assumptions:[19]

1. Adults have the need to know why they are learning something.
2. Adults have a need to be self-directed.
3. Adults bring more work-related experiences into the learning situation.
4. Adults enter a learning experience with a problem-centered approach to learning.
5. Adults are motivated to learn by both extrinsic and intrinsic motivators.

Adult learning theory is especially important to consider in developing training programs because the audience for many such programs tends to be adults, most of whom have not spent a majority of their time in a formal education setting. **Table 4.2** shows implications of adult learning theory for learning.

TABLE 4.2 Implications of Adult Learning Theory for Training

Design Issue	Implications
Self-concept	Mutual planning and collaboration in instruction
Experience	Use learner experience as basis for examples and applications
Readiness	Develop instruction based on the learner's interests and competencies
Time perspective	Immediate application of content
Orientation to learning	Problem-centered instead of subject-centered

Consider how adult learning theory is incorporated into training programs.[20] To help New York Life Insurance Company's early career product consultants—employees who support sales agents by phone—improve their presentation skills so they can move from a support role to a sales role, the company's learning and development team designed a year-long program that combines five months of classroom training with five months of practice, feedback, and coaching and includes an action learning project. The action learning project presents groups of career product consultants with an important business problem. As a group they decide on a solution and present it to the company's senior leaders.[21] Yapi ve Kredi Bank's program to help managers improve their skills in motivating and coaching their employees includes classroom sessions in which trainers review case studies of common situations in coaching and provide students with online readings and videos. Senior managers review coaching and development techniques, and program participants are given coaching assignments to complete with their peers. The first-line manager course at B&W Pantex focuses on soft skills as well as human resource (HR) policies, discipline, and supervision using instructor-led training with video presentations and role playing. The course includes real-life scenarios based on actual situations that have occurred in its facilities. The program also includes on-the-job training in which trained and qualified subject-matter experts (SMEs) teach tasks and procedures. Brown-Forman, one of the largest companies in the global wine and spirits industry (its brands include Jack Daniel's Tennessee Whiskey, Southern Comfort, Findlandia vodka, and Herradura tequila), created a two-and-a-half-day training program focused on helping the company's marketing professionals build the brand. The company's chief marketing officer visits the class to explain the importance of the course's content and why it was developed. In the course, participants work in teams to develop a brand campaign for a sample brand. This includes making presentations and completing exercises. Representatives from Brown-Forman's creative agencies attend the program, part of which involves interacting with consumers to identify their drinking patterns and preferences. At the end of the program, participant teams present their final project to a panel of senior marketing executives who serve as judges.

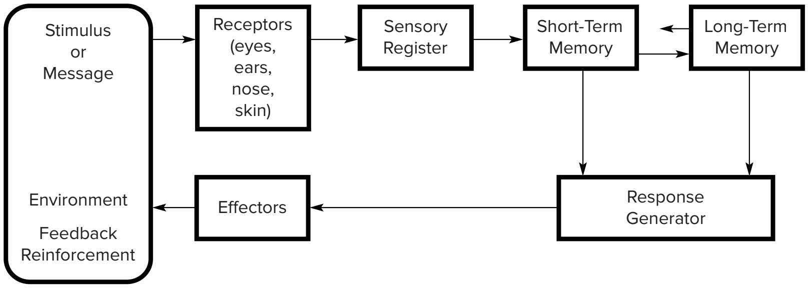
Information Processing Theory

Compared to other learning theories, information processing theories give more emphasis to the internal processes that occur when training content is learned and retained. **Figure 4.4** shows a model of information processing. Information processing theories propose that information or messages taken in by the learner undergo several transformations in the human brain.[22] Information processing begins when a message or stimulus (which could be a sound, smell, touch, or picture) from the environment is received by receptors (i.e., ears, nose, skin, and eyes). The message is registered in the senses and stored in short-term memory, and then it is transformed or coded for storage in long-term memory. A search process occurs in memory, during which time a response to the message or stimulus is organized. The response generator organizes the learner's response and tells the effectors (muscles) what to do. The "what to do" instruction relates to one of the five learning outcomes: verbal information, cognitive skills, motor skills, intellectual skills, or attitudes. The final link in the model is feedback from the environment. This feedback provides the learner with an evaluation of the response given. This information can come from another person or the learner's observation of the results of his or her own action. A positive evaluation of the response provides reinforcement that the behavior is desirable and should be stored in long-term memory for use in similar situations.

Besides emphasizing the internal processes needed to capture, store, retrieve, and respond to messages, the information processing model highlights how external events influence learning. These events include:[23]

1. Changes in the intensity or frequency of the stimulus that affect attention.
2. Informing the learner of the objectives to establish an expectation.
3. Enhancing perceptual features of the material (stimulus), drawing the attention of the learner to certain features.
4. Verbal instructions, pictures, diagrams, and maps suggesting ways to code the training content so that it can be stored in memory.

FIGURE 4.4 **A Model of Human Information Processing**



Sources: Based on R. Gagne, "Learning Processes and Instruction," *Training Research Journal* 1 (1995/96), pp. 17–28; D. Rock, "Your Brain on Learning," *Chief Learning Officer,* May 2015, pp. 30–48.

5. Meaningful learning context (examples, problems) creating cues that facilitate coding.
6. Demonstration or verbal instructions helping to organize the learner's response, as well as facilitating the selection of the correct response.

Transfer of Training Theory

Transfer of training is more likely to occur when the trainee works on tasks during training (e.g., knowledge, equipment, or processes) that are very similar, if not identical, to the work environment (*near transfer*). Transfer of training is more difficult when tasks during training are different from the work environment (*far transfer*), such as applying customer service principles to an interaction with an angry customer in front of a long line of customers at a check-out counter. The tasks that are used during training should relate to the training objectives.

Closed skills refer to training objectives that are linked to learning specific skills that are to be identically produced by the trainee on the job. There is only one correct way to complete a task if it requires closed skills. In contrast, **open skills** are linked to more general learning principles. Customer service skills are an example of open skills. There is not a single correct way to perform and the learner is given some general principles to follow. For example, a sales clerk is likely trained on general principles or processes for how to interact with an angry customer but has the freedom to choose from among those principles in an actual interaction, because the customer's intentions and responses are not entirely predictable.[24] Open skills are more difficult to train than closed skills because they require the trainee to not only acquire and recall general principles, but also to consider how they can be adapted and used to fit a wide range of circumstances, many of which cannot be practiced during training. Also, manager and peer support on the job is important for giving the trainee the opportunity to learn by seeing how experienced employees use the skills and to get feedback when the trainee has the chance to apply them. Later in this chapter, we discuss the implications of transfer of training theories for designing training. In **Chapter Five**, we will discuss how specific training program design features can facilitate learning and transfer of both open and closed skills.

Consider the transfer of training issues that Continental Airlines faced in preparing its pilots to fly the 787 Dreamliner airplane.[25] First, Continental flew the airplane on its U.S. routes to familiarize flight and ground crew staff with it. Continental trained approximately 24 pilots for each plane that was delivered. The 787 flight deck was similar but not identical to the 777 airplane that Continental's pilots were currently flying. Training included use of a flight simulator of the 787 and computer-based courses. One of the most difficult tasks for pilots was becoming familiar with a display that drops down in front of them, providing important flight information. The purpose of the display is to improve visibility during difficult flying conditions. Pilots liked the display but found that it takes time to get used to it because it requires them to adjust their depth perception.

Three theories of transfer of training have implications for training design (the learning environment): the theory of identical elements, the stimulus generalization approach, and the cognitive theory of transfer.[26] **Table 4.3** shows each theory's primary emphasis and the most appropriate conditions for its consideration.

Theory of Identical Elements

The **theory of identical elements** proposes that transfer of training occurs when what is being learned in the training session is identical to the tasks the trainee has to perform on the job.[27] Transfer will be maximized to the degree that the tasks, materials, equipment, and other characteristics of the learning environment are similar to those encountered in the work environment.

TABLE 4.3 Transfer of Training Theories

Theory	Emphasis	Appropriate Conditions	Type of Transfer
Identical elements	Training environment is identical to work environment.	Training focuses on closed skills. Work environment features are predictable and stable. *Example*: Training to use equipment.	Near
Stimulus generalization	General principles are applicable to many different work situations.	Training focuses on open skills. Work environment is unpredictable and highly variable. *Example*: Training in interpersonal skills.	Far
Cognitive theory	Meaningful material and coding schemes enhance storage and recall of training content.	All types of training and environments.	Near and far

The use of identical elements theory is shown in the hostage training simulation used by the Baltimore Police Department. The Baltimore Police Department needed to teach police sergeants the skills to handle hostage-barricade situations in which lives are at stake—skills such as negotiating with a troubled husband holding his wife and/or children hostage. The first hour of a hostage situation is critical. The sergeant must organize resources quickly to achieve a successful end to the situation, with minimal or no injuries. Baltimore Police Department chose a training simulation because it provides a model of reality, a mock-up of a real situation without the danger. Multiple scenarios can be incorporated into the simulation, allowing the sergeants to practice the exact skills that they need when facing an actual hostage crisis.

The simulation begins by briefing the trainees on the hostage situation. Then they are directed to take charge of resolving the incident in the presence of an instructor who has personally been involved in similar real-life incidents. Each trainee supervises one difficult and one easy scenario. The simulation is designed to emphasize the importance of clear thinking and decision making in a situation in which time is critical. It is essential that the trainees take actions according to a set of priorities that place the greatest value on minimizing the risks to the hostages and isolating the suspects before communicating with them. The simulation scenarios include elements of many actual hostage incidents, such as forced entry, taking persons against their will, the presence of a weapon, and threats. As trainees work in the simulation, their actions are evaluated by the instructor. The instructor can either provide feedback to the trainees in writing after they complete the simulation or correct mistakes as they happen.

The training simulation mirrors the exact circumstances of actual hostage situations encountered by police officers. Also, the checklist of activities and behaviors that the sergeants are provided in training is the exact checklist used in hostage situations that occur on the street. Evidence of generalization is provided by police sergeants who have successfully dealt with a bank-hostage situation by using the skills emphasized in the simulation. The Baltimore Police Department is also concerned with maintenance. At the conclusion of the simulation, officers may be able to demonstrate how to free hostages successfully. However, the incidence of hostage situations is fairly low compared to other tasks that police officers perform (e.g., issuing traffic citations or investigating burglaries). As a result, the police department is concerned that officers may forget what they learned in training and therefore have difficulties in hostage situations. To ensure that officers have opportunities to practice these infrequently used but important skills, the training department occasionally schedules mock hostage situations.[28]

Another application of the theory of identical elements is found in the use of simulators for training airline pilots. Pilots are trained in a simulator that looks exactly like the cockpit of a commercial aircraft. All aspects of the cockpit in the simulator (e.g., gauges, dials, and lights) are the same as in a real aircraft. In psychological terms, the learning environment has complete fidelity with the work environment. **Fidelity** refers to the extent to which the training environment is similar to the work environment. If skills in flying, taking off, landing, and dealing with emergency situations are learned in the simulator, they will be transferred to the work setting (commercial aircraft).

The identical elements approach also has been used to develop instruments that are designed to measure the similarity of jobs.[29] Job similarity can be used as one measure of the extent to which training in the knowledge and skills required for one job prepares an employee to perform a different job.

The theory of identical elements has been applied to many training programs, particularly those that deal with the use of equipment or that involve specific procedures that must be learned. Identical elements theory is particularly relevant in making sure that near transfer occurs. **Near transfer** refers to trainees' ability to apply learned capabilities exactly to the work situation.

Identical elements theory does not encourage transfer where the learning environment and the training environment are not necessarily identical. This situation arises particularly in interpersonal skills training. For example, a person's behavior in a conflict situation is not easily predictable. Therefore, trainees must learn general principles of conflict resolution that they can apply to a wide variety of situations as circumstances dictate (e.g., an irate customer versus a customer who lacks product knowledge).

Stimulus Generalization Approach

The **stimulus generalization approach** suggests that transfer of training occurs when training emphasizes the most important features of a task or general principles that can be used to complete a task or solve a problem. It is important to identify the range of work situations in which these general principles can be applied. The stimulus generalization approach emphasizes far transfer. **Far transfer** refers to the trainee's ability to apply learned capabilities to the work environment, even though the work environment (equipment, problems, and tasks) is not identical to that of the training session.

The stimulus generalization approach can be seen in the design of some skill training programs, which are based on social learning theory. Recall from the discussion of social learning theory that modeling, practice, feedback, and reinforcement play key roles in learning. One step in developing effective interpersonal skill training programs is to identify key behaviors that are needed to be successful in a situation. **Key behaviors** refer to a set of behaviors that can be used successfully in a wide variety of situations. In a training scenario, the model demonstrates these key behaviors in a video, and trainees have opportunities to practice them. The key behaviors are believed to be applicable to a wide variety of situations. In fact, the practice sessions in this type of training require the trainee to use the behaviors in a variety of situations that are not identical.

Cognitive Theory of Transfer

The cognitive theory of transfer is based on the information processing theory of learning discussed earlier in the chapter. Recall that storage and retrieval of information are key aspects of this model of learning. According to the **cognitive theory of transfer**, the likelihood of transfer is increased by providing trainees with meaningful material that enhances the chances that they will link what they encounter in the work environment to the learned capability. Also important is providing the trainee with cognitive strategies for coding the learned capabilities in memory so that they are easily retrievable.

The influence of cognitive theory is seen in training design that encourages trainees, as part of the program, to consider potential applications of the training content to their jobs. Many training programs include having trainees identify a work problem or situation and discuss the potential application of training content.

The Learning Process

Now that you have reviewed the learning and transfer of training theories, you are ready to address three questions: What are the physical and mental processes involved in learning? How does learning and transfer occur? Do trainees have different learning styles?

Mental and Physical Processes

Table 4.4 shows the learning processes, including expectancy, perception, working storage, semantic encoding, long-term storage, retrieval, generalizing, and gratification.[30] **Table 4.4** emphasizes that learning depends on the learner's cognitive processes, including attending to what is to be learned (learning content), organizing the learning content into a mental representation, and relating the learning content to existing knowledge from long-term memory.[31] As noted earlier in this chapter, expectancy refers to the mental state that the learner brings to the instructional process. This includes factors such as readiness for training (motivation to learn, basic skills) as well as an understanding of the purpose of the instruction and the likely benefits that may result from learning and using the learned capabilities on the job. **Perception** refers to the ability to organize the message from the environment so that it can be processed and acted upon. Both working storage and semantic encoding relate to short-term memory. In **working storage**, rehearsal and repetition of information occur, allowing material to be coded for memory. Working storage is limited by the amount of material that can be processed at any one time. Research suggests that not more than five messages can be prepared for storage at the same time.

TABLE 4.4 The Relationship Among Learning Processes, Instructional Events, and Forms of Instruction

Processes of Learning	External Instructional Events	Forms of Instruction
Expectancy	Informing the learner of the lesson objective	Demonstrate the expected performance. Indicate the kind of verbal question to be answered.
Perception	Presenting stimuli with distinctive features	Emphasize the features of the subject to be perceived. Use formatting and figures in text to emphasize features.
Working storage	Limiting the amount to be learned	Arrange lengthier material in chunks. Provide a visual image of material to be learned. Provide practice and overlearning to aid the attainment of automaticity.
Semantic encoding	Providing learning guidance	Provide verbal cues to the proper combining sequence. Provide verbal links to a larger meaningful context. Use diagrams and models to show relationships among concepts.

Processes of Learning	External Instructional Events	Forms of Instruction
Long-term storage	Elaborating the amount to be learned	Vary the context and setting for presentation and recall of material. Relate newly learned material to previously learned information. Provide a variety of contexts and situations during practice.
Retrieval	Providing cues that are used in recall	Suggest cues that elicit the recall of material. Use familiar sounds or rhymes as cues.
Generalizing	Enhancing retention and learning transfer	Design the learning situation to share elements with the situation to which learning applies. Provide verbal links to additional complexes of information.
Gratifying	Providing feedback about performance correctness	Provide feedback on degree of accuracy and timing of performance. Confirm whether original expectancies were met.

Sources: Based on K. Kraiger and J. Ford, "The Science of Workplace Instruction: Learning and Development Applied to Work," *Annual Review of Organizational Psychology and Organizational Behavior* 8 (2021): 45–72; M. Cole, *The Science of Learning* (Alexandria: VA: Association for Talent Development, 2017); R. Gagne, "Learning Processes and Instruction," *Training Research Journal* 1 (1995/96), pp. 17–28; D. Rock, "Your Brain on Learning," *Chief Learning Officer,* May 2015, pp. 30–48; A. Beninghof, "Pathways to Retention," *T+D,* June 2015, pp. 21–22; M. Torrance, "Nine Moments of Learning," *T+D,* September 2014, pp. 76–77.

Semantic encoding refers to the actual coding process of incoming messages. Different learning strategies influence how training content is coded. Learning strategies include rehearsal, organizing, and elaboration.[32] **Rehearsal**, the simplest learning strategy, focuses on learning through repetition (memorization). **Organizing** requires the learner to find similarities and themes in the training material. **Elaboration** requires the trainee to relate the training material to other, more familiar knowledge, skills, or behaviors. Trainees use a combination of these strategies to learn. The "best" strategy depends on the learning outcome. For knowledge outcomes, rehearsal and organization are most appropriate. For skill application, elaboration is necessary. After messages have been attended to, rehearsed, and coded, they are ready for storage in long-term memory.

To use learned material (e.g., cognitive skills or verbal information), it must be retrieved. **Retrieval** involves identifying learned material in long-term memory and using it to influence performance. An important part of the learning process is not only being able to reproduce exactly what was learned, but also being able to adapt the learning for use in similar but not identical situations. This is known as **generalizing**. Finally, **gratifying** refers to the feedback that the learner receives as a result of using learning content. Feedback is necessary to allow the learner to adapt responses so they are more appropriate. Feedback also provides information about the incentives or reinforcers that may result from performance.

Learning Cycles and Styles

Several models of learning styles have been proposed. Some suggest that trainees will learn best if instruction matches how they like to learn (e.g., visual, through movement, hearing). Others suggest that learning involves stages or cycles. Trainees tend to overemphasize one stage or another, and to become effective learners, they need to develop strengths in each of the stages. For example, one model suggests learning involves four stages: concrete experience (e.g., encountering a work problem), reflection (thinking about the problem), abstract conceptualization (generating ideas how to solve the problem), and active experimentation (implementing the ideas).[33] Implementing the ideas provides feedback as to their effectiveness so the learner can see the results and start the learning process over again. Conventional wisdom suggests that instruction needs to match the trainees' learning style or force them to engage in all stages. In fact, there is little to no evidence supporting that matching instruction to trainees' learning style enhances learning and transfer of training.[34] Rather, well-designed instruction (discussed next) benefits all trainees.

Implications of the Learning Process and Transfer of Training for Instruction

Instruction refers to the trainer's manipulation of the environment in order to help trainees learn.[35] Returning to **Table 4.4**, the right side of this table shows the forms of instruction that support learning. To provide trainees with the best chance to learn, it is important to ensure that these forms of instruction are included in training. **Table 4.5** summarizes the features of good instruction that facilitate the learning process. The features of a positive learning environment and transfer of training need to be designed into training courses, programs, or specific training methods that might be used, whether in the form of lectures, e-learning, or on-the-job training. The influence of different training methods alone on learning and transfer is less important than including the features shown in **Table 4.5** in whatever method is used. Here, as well as later in the chapter, we discuss these features.

TABLE 4.5 Features of Instruction and the Work Environment That Facilitate Learning and Transfer of Training

- Objectives
- Meaningful content
- Opportunities to practice
- Methods for committing training content to memory
- Feedback
- Observation, experience, and social interaction
- Proper coordination and arrangement of the training program
- Encourage trainee responsibility and self-management
- Ensure that the work environment supports learning and transfer

Employees Need to Know the Objectives

Employees learn best when they understand the objective of the training program. The **objective** refers to the purpose and expected outcome of training activities. There may be objectives for each training session, as well as overall objectives for the program. Keep in mind that training objectives are the last step of the process that begins with business goals.[36] Business goals influence the expected performance of roles or positions, and in turn, the tasks that need to be completed. Training objectives focus on the behavior, knowledge, or skills needed to complete the tasks.

Recall the discussion of goal setting theory earlier in the chapter. Because objectives can serve as goals, trainees need to understand, accept, and be committed to achieving the training objectives for learning to occur. Training objectives based on the training needs analysis help employees understand why they need training and what they need to learn. Objectives are also useful for identifying the types of training outcomes that should be measured to evaluate a training program's effectiveness.

A training objective has three components:[37]

1. A statement of what the employee is expected to do (performance or outcome).
2. A statement of the quality or level of performance that is acceptable (criterion).
3. A statement of the conditions under which the trainee is expected to perform the desired outcome (conditions).

The objective should not describe performance that cannot be observed, such as "understand" or "know." **Table 4.6** shows verbs that can be used for cognitive, affective, and psychomotor (physical abilities and skills) outcomes. For example, a training objective for a customer-service training program for retail salespeople might be "After training, the employee will be able to express concern [performance] to all irate customers by offering a brief, sincere (fewer than 10-word) apology, in a professional manner [criteria], no matter how upset the customer is [conditions]." **Table 4.7** shows the characteristics of good training objectives.

TABLE 4.6 Examples of Performance or Outcomes for Objectives

Domain	Performance
Knowledge (recall of information)	Arrange, define, label, list, recall, repeat
Comprehension (interpret in own words)	Classify, discuss, explain, review, translate
Application (apply to new situation)	Apply, choose, demonstrate, illustrate, prepare
Analysis (break down into parts and show relationships)	Analyze, categorize, compare, diagram, test
Synthesis (bring together to form a whole)	Arrange, collect, assemble, propose, set up
Evaluation (judgments based on criteria)	Appraise, attack, argue, choose, compare
Receiving (pay attention)	Listen to, perceive, be alert to
Responding (minimal participation)	Reply, answer, approve, obey
Valuing (preferences)	Attain, assume, support, participate
Organization (development of values)	Judge, decide, identify with, select
Characterization (total philosophy of life)	Believe, practice, carry out
Reflexes (involuntary movement)	Stiffen, extend, flex
Fundamental movements (simple movements)	Crawl, walk, run, reach
Perception (response to stimuli)	Turn, bend, balance, crawl
Physical abilities (psychomotor movements)	Move heavy objects; make quick motions
Skilled movements (advanced learned movements)	Play an instrument; use a hand tool

Sources: Based on H. Sredl and W. Rothwell, "Setting Instructional Objectives," in *The ASTD Reference Guide to Professional Training Roles and Competencies*, Vol. II (New York: Random House, 1987), Chapter 16; R. Mager, *Preparing Instructional Objectives*, 3d ed. (Atlanta: Center for Effective Performance, 1997).

Some of the most common problems with objectives include that they are unclear, incomplete, or unspecific.[38] **Table 4.8** provides some examples of learning objectives. As you review each objective, identify if it includes each of the three components (performance, criteria, condition). Are these good objectives? How can they be improved?

TABLE 4.7 Characteristics of Good Training Objectives

- Provide a clear idea of what the trainee is expected to be able to do at the end of training.
- Include standards of performance that can be measured or evaluated.
- State the specific resources (e.g., tools and equipment) that the trainee needs to perform the action or behavior specified.
- Describe the conditions under which performance of the objective is expected to occur (e.g., the physical work environment, such as at night or in high temperatures; mental stresses, such as angry customers; or equipment failure, such as malfunctioning computer equipment).

TABLE 4.8 Examples of Learning Objectives

- Develop a diverse multifunctional team that can compete in a challenging environment to produce outcomes that will enhance results.
- Use conflict management skills when faced with a conflict.
- Smile at all customers, even when exhausted, unless the customer is irate.
- Reduce product defects from 10 to 7 percent.
- List all of the nodes of a DC-3 multi-switch correctly, without using a reference manual.
- Use the software 100 percent accurately, given access to the quick reference guide.

Employees Need Meaningful Training Content

Employees are most likely to learn when the training is linked to their current job experiences and tasks–that is, when it is meaningful to them.[39] To enhance the meaningfulness of training content, the message should be presented using concepts, terms, and examples familiar to trainees. Also, the training context should mirror the work environment. The **training context** refers to the physical, intellectual, and emotional environment in which training occurs. For example, in a retail salesperson customer-service program, the meaningfulness of the material will be increased by using scenarios of unhappy customers actually encountered by salespersons in stores. Some useful techniques for convincing trainees that the training program content is meaningful include:[40]

- Telling stories about others' success in applying training content, especially former trainees.
- Relating training content to what trainees already know about their jobs.
- Showing how training relates to company goals and strategy.
- Showing how trainees can use training content ideas at work.
- Discussing examples or cases that remind trainees of the good and poor work they have seen.
- Repeating the application of ideas in different contexts.
- Presenting evidence that what they will learn during training is what high-performing employees use in their jobs.
- Showing how the conditions that trainees face in training are similar to those on the job.
- Providing practice or application activities that can be used on the job.
- Providing hard copies or electronic access to well-organized materials so trainees can refer to them on the job or use them to teach others.
- Allowing trainees to choose their practice strategy and how they want training content presented (e.g., verbally, visually, problem-based, or using a combination of approaches).
- Provoking trainees' emotions using real-world stories and situations related to the content that trainees can identify with.

Employees Need Opportunities to Practice

Practice refers to the physical or mental rehearsal of a task, knowledge, or skill to achieve proficiency in performing the task or skill or demonstrating the knowledge. Practice involves having the employee demonstrate the learned capability (e.g., cognitive strategy, verbal information) emphasized in the training objectives under conditions and performance standards specified by the objectives. For practice to be effective, it needs to involve the trainee actively, include overlearning (repeated practice), take the appropriate amount of time, and include the appropriate unit of learning (amount of material). Practice also needs to be relevant to the training objectives. It is best to include a combination of examples and practice, rather than all practice.[41] This helps avoid overloading trainees' memory so they can engage in the cognitive processes needed for learning to occur (selecting, organizing, and integrating content). Viewing examples helps learners develop a new mental model of skills, which they can then use in practice. Some examples of ways to practice include case studies, simulations, role play, games, and oral and written questions.

Pre-Practice Conditions

Trainers need to focus not just on training content, but also on how to enable trainees to process information in a way that will facilitate learning and the use of training on the job. There are several steps that trainers can take within the training course prior to practice to enhance trainees' motivation to learn and to facilitate retention of training content. Before practice, trainers can[42]

1. Provide information about the process or strategy that will result in the greatest learning. For example, let trainees in a customer service class know about the types of calls they will receive (irate customer, request for information on a product, challenge of a bill), how to recognize such calls, and how to complete the calls.
2. Encourage trainees to develop a strategy (metacognition) to reflect on their own learning process. **Metacognition** refers to an individual's control over his or her own thoughts and learning process. Two ways that individuals engage in metacognition are monitoring and control.[43] Research shows that metacognition, including self-regulation, promotes learning.[44] **Self-regulation** refers to learners' involvement with the training material and assessing their progress toward learning. Learners who engage in self-regulation likely learn more effectively because they are able to monitor their progress, identify areas needing improvement, and adjust their learning. Self-regulation may be especially important for online training courses, in which learners have control over the learning experience such that they can decide to drop out of courses and decide how much effort, if any, they want to exert to learn the training content. **Table 4.9** provides examples of questions that trainers can encourage trainees to answer to help encourage metacognition and self-regulation. Trainers (and online learning designers) can also aid metacognition by asking trainees to summarize the key points after a topic is completed; consider how to deal with factors on the job that might inhibit application of learning content; and develop quiz questions and answers and ask other trainees to answer them.[45]
3. Provide **advance organizers**—outlines, texts, diagrams, and graphs that help trainees organize the information that will be presented and practiced.
4. Help trainees set challenging mastery or learning goals.
5. Create realistic expectations for trainees by communicating what will occur in training.
6. When training employees in teams, communicate performance expectations and clarify the roles and responsibilities of team members.
7. Help trainees in the early phases of instruction alleviate their anxiety and increase their focus.
8. Start training with the simple aspects of the task (knowledge, skill, behavior) and gradually build in complexity and difficulty.

TABLE 4.9 Examples of Questions That Encourage Self-Regulation

- Am I concentrating on the training material?
- Do I understand the key points?
- Am I setting goals to help me remember the material after I finish the course?
- Are the study tactics I have been using effective for learning the training material?
- Would I do better on the test if I studied more?
- Have I spent enough time reviewing to remember the information after I finish the course?
- What additional help and resources do I need?
- What do I need to remember? How will I remember?

Sources: From P. Shank, "Self-Sufficient Learners Make Successful Workers," *T+D,* April 2017, pp. 43–46; T. Sitzmann, "Self-Regulating Online Course Engagement," *T+D,* March 2010, p. 26.

Practice Involves Experience

Learning will not occur if employees practice only by talking about what they are expected to do. For example, using the objective for the customer service course previously discussed, practice would involve having trainees participate in role-playing with unhappy customers (customers upset with poor service, poor merchandise, or unsatisfactory exchange policies). Training should involve an active learning approach in which trainees must explore and experiment to determine the rules, principles, and strategies for effective performance.[46] To maximize retention and transfer, trainees should have the opportunities to apply skills across different tasks, people, and situations that occur on the job. Practice should start with the easier aspect of a task, problem, or skill and increase in difficulty as mastery is demonstrated. Trainees need to continue to practice even if they have been able to perform the objective several times (known as **overlearning**). Overlearning helps the trainee become more comfortable using new knowledge and skills and increases the length of time the trainee will retain the knowledge, skill, or behavior. For example, customer service representatives in Verizon's video training program were asked to watch multiple scenarios of interactions with customers, record their responses using a smartphone or webcam, and submit the video to their assigned coach. The coach provided feedback on the strengths and weaknesses of the representatives' responses. The representatives could record a new response after they received feedback from the coach. Verizon found that the recording and feedback process encouraged employees to practice multiple times. This repeated practice resulted in improved customer service skills.[47]

Conventional wisdom is that we all learn the most from our errors. However, most people feel that errors are frustrating and lead to anger and despair. Research suggests that from a training perspective, errors can be useful.[48] **Error management training** refers to giving trainees opportunities to make errors during training. In error management training, trainees are instructed that errors can help learning, and they are encouraged to make errors and learn from them. Trainees may actually commit more errors and may take longer to complete training that incorporates error management training. However, error management training helps improve employee use of learned skills on the job (i.e., transfer of training).

Error management training is effective because it provides the opportunity for trainees to engage in metacognition; that is, it allows them to plan how to use training content, to monitor the use of training content, and to evaluate how training content was used. This results in a deeper level of cognitive processing, leading to better memory and recall of training. Trainers should consider using error management training in the training program along with traditional approaches by giving trainees the opportunity to make errors when they work alone on difficult problems and tasks and encouraging them to use errors as a way to learn.

It is important to note that allowing trainees simply to make errors does not help improve learning. For errors to have a positive influence on learning, trainees need to be taught to use errors as a chance to learn. Error management training may be particularly useful whenever the training content to be learned cannot be completely covered during a training session. As a result, trainees have to discover on their own what to do when confronted with new tasks or problems.

Massed versus Spaced Practice

The frequency of practice has been shown to influence learning, depending on the type of task being trained.[49] **Massed practice** conditions are those in which individuals practice a task continuously, without resting. Massed practice also involves having trainees complete practice exercises at one time within a lesson or class rather than distributing the exercises within the lesson. In **spaced practice** conditions, individuals are given rest intervals within practice sessions. Spaced practice is superior to massed practice in general. However, the difference in effectiveness of massed versus spaced practice varies by the characteristics of the task. Task characteristics include overall task complexity, mental requirements, and physical requirements. **Overall task complexity** refers to the degree to which a task requires a number of distinct behaviors, the number of choices involved in performing the task, and the degree of uncertainty in performing the task. **Mental requirements** refers to the degree to which the task requires the subject to use or demonstrate mental skills or cognitive skills or abilities to perform the task. **Physical requirements** refers to the degree to which the task requires the person to use or demonstrate physical skills and abilities to perform and complete the task. **Table 4.10** shows how tasks can differ.

TABLE 4.10 **Mental and Physical Requirements and Overall Complexity for Tasks**

Mental Requirements	Overall Complexity	Physical Requirements
Low	Low	High
Task Examples: Rotary pursuit, typing, ball toss, ladder climb, peg reversal, bilateral transfer, crank turning		
High	Average	Low
Task Examples: Free recall task, video games, foreign language, slide-bar task, voice recognition, classroom lecture, sound localization, word processing, stoop task, verbal discrimination, maze learning, connecting numbers, upside-down alphabet printing, distance learning, web training		
Low	High	High
Task Examples: Gymnastic skills, balancing task		
High	High	High
Task Examples: Air traffic controller simulation, milk pasteurization simulation, airplane control simulation, hand movement memorization, puzzle box task, music memorization and performance		

Source: J. Donovan and D. Radosevich, "A Meta-Analytic Review of the Distribution of Practice Effect: Now You See It, Now You Don't," *Journal of Applied Psychology* 84 (1999), pp. 795–805.

For more complex tasks (including those that are representative of training settings, such as web-based instruction, lecture, and distance learning), relatively long rest periods appear to be beneficial for task learning. After practice, trainees need specific feedback to enhance learning. This includes feedback from the task or job itself, as well as feedback from trainers, managers, and peers.

Whole versus Part Practice

A final issue related to practice is how much of the training should be practiced at one time. One option is that all tasks or objectives should be practiced at the same time (**whole practice**). Another option is that each objective or task should be practiced individually as soon as it is introduced in the training program (**part practice**). It is probably best to employ both whole and part practice in a training session. Trainees should have the opportunity to practice individual skills or behaviors. If the skills or behaviors introduced in training are related to one another, the trainee should demonstrate all of them in a practice session after they have been practiced individually. Practice activities should expose trainees to a variety of training content by switching between topics throughout the session. This helps facilitate learning because it helps ensure that content is retained in trainees' long-term memory. Transfer of training is also enhanced because trainees are being asked to recall and apply skills and knowledge in the same way they work (i.e., using different knowledge and skills as they shift their focus between different tasks and problems).

Effective Practice Conditions

For practice to be relevant to the training objectives, several conditions must be met.[50] Practice must involve the actions emphasized in the training objectives; be completed under the conditions specified in the training objectives; help trainees perform to meet the criteria or standard that was set; provide some means to evaluate the extent to which trainees' performance meets the standards; and allow trainees to correct their mistakes.

Practice must be related to the training objectives. The trainer should identify what trainees will be doing when practicing the objectives (performance), the criteria for attainment of the objective, and the conditions under which they may perform. These conditions should be present in the practice session. Practice activities should be as realistic as possible. That is, trainees should be involved in practice that mirrors how they will be asked to use the training content on the job. Next, the trainer needs to consider the adequacy of the trainees' performance. That is, how will trainees know whether their performance meets performance standards? Will they see a model of desired performance? Will they be provided with a checklist or description of desired performance? Can the trainees decide if their performance meets standards, or will the trainer or a piece of equipment compare their performance with standards?

Finally, in the event that trainees' performance does not meet standards, the trainer must decide whether trainees will be able to understand what is wrong and how to fix it. That is, trainers need to consider whether trainees will be able to diagnose their performance and take corrective action, or if they will need help from the trainer or a fellow trainee.

Employees Need to Commit Training Content to Memory

Memory works by processing stimuli we perceive through our senses into short-term memory. If the information is determined to be "important," it moves to long-term memory, where new interconnections are made between neurons or electrical connections in the brain. Research shows there are several ways to help trainees commit content to memory (see **Table 4.11**).[51]

One way is to make trainees aware of how they are creating, processing, and accessing memory. It is important for trainees to understand how they learn.

Important points should be highlighted and irrelevant content eliminated to help trainees maximize the use of their cognitive resources for remembering what's important. Visuals such as graphs and videos can be especially useful in providing the learner with relevant, important content.

To create long-term memory, training programs must be explicit on content and elaborate on details. One approach that trainers use is to create a concept map to show relationships among ideas. Another is to use multiple forms of review including writing, drawings, and role play to access memory through multiple methods. Teaching key words, a procedure, or a sequence, or providing a visual image gives trainees another way to retrieve information. Reminding trainees of knowledge, behavior, and skills that they already know that

TABLE 4.11 How to Help Trainees Commit Training Content to Memory

- Help them understand how they learn
- Emphasize important points and eliminate irrelevant content
- Use a concept map to show relationships among ideas
- Teach key words; provide a procedure, sequence, or visual image
- Encourage trainees to take notes and engage in reflection
- Have trainees engage in overlearning
- Provide rest breaks during training
- Use quizzes or boosters
- Break courses into small chunks of learning using modules or microlearning
- Have trainees complete pretraining work
- Present and explain related knowledge, principles, and ideas close in time

Sources: Based on K. Kraiger and J. Ford, "The Science of Workplace Instruction: Learning and Development Applied to Work," *Annual Review of Organizational Psychology and Organizational Behavior* 8 (2021), pp. 45–72; K. Kraiger and V. Mattingly, "Cognitive and Neural Foundations of Learning," in *The Cambridge Handbook of Workplace Training and Employee Development*, K. Brown, ed. (New York: Cambridge University Press, 2018);
"The Art & Science of Learning That Sticks," from www.grovo.com, accessed February 9, 2018; D. Rock, "Your Brain on Learning," *Chief Learning Officer,* May 2015, pp. 30–48; A. Beninghof, "Pathways to Retention," *T+D,* June 2015, pp. 21–22; R. Weiss, "Memory and Learning," *Training and Development,* October 2000, pp. 46–50; R. Zemke, "Toward a Science of Training," *training,* July 1999, pp. 32–36.

are relevant to the current training content creates a link to long-term memory that provides a framework for recalling the new training content. External retrieval cues can also be useful. Consider a time when you misplaced your keys or wallet. In trying to remember, we often review all the information we can recall that was close in time to the event or that preceded the loss. We often go to the place where we were when we last saw the item because the environment can provide cues that aid in recall.

Like other teams in the National Football League, the Cleveland Browns players have notebook computers to learn plays, schemes, and prepare for opponents by watching videos and taking notes.[52] However, the Browns coaches also believe that players can't just watch videos, they need to actively learn. So coaches are encouraging players not just to type on their notebooks but to write things down using pencil and paper. The idea is to get the players to mentally process what they are supposed to be learning, which helps commit that learning to memory. Taking notes by writing rather than typing causes the learner to rephrase ideas in their own words, which means they must process the information at a deeper level in the brain. Another way to help employees commit what they learn to memory involves reflection. **Reflection** involves having trainees spend a short amount of time, such as 15 minutes, reviewing and writing about what they learned and how they performed.[53] Rest breaks are necessary to help trainees optimize their focus and attention on training content. Without rest breaks memory becomes overloaded, which makes it difficult for trainees to retain content in long-term memory. Finally, quizzes and tests enhance learning by requiring the trainee to retrieve information from memory. This helps ensure that the training content will be retained over a longer period of time.

Long-term memory is also enhanced by going beyond one-trial learning. One-trial learning refers to the first time trainees correctly demonstrate a behavior or skill or correctly recall knowledge. It is often assumed that they have learned the behavior, knowledge, or skill at this point but this is not always true. To retain the knowledge, skill, and behavior or other training content, trainees need to engage in overlearning. As discussed earlier, overlearning refers to reviewing and practicing multiple times to help ensure training content is stored in long-term memory. Overlearning also helps autonomize a task. **Automatization** refers to making performance of a task, recall of knowledge, or demonstration of a skill so automatic that it requires little thought or attention. Automatization also helps reduce memory demands. The more that automatization occurs, the more that memory is freed up to concentrate on other learning and thinking. The more active a trainee is in rehearsal and practice, the greater the amount of information retained in long-term memory and the less memory decay over time. For example, opportunities for learners to retrieve what they have learned can also increase retention.[54] **Boosters** refer to retrieval opportunities that can help the learner's brain consider training information as important and help retain it. Boosters can include short multiple-choice questions, short-answer quizzes, or other activities that require learners to retrieve what they have learned from long-term memory.

Research suggests that no more than four or five items can be attended to at one time. If a lengthy process or procedure is to be taught, instruction needs to be delivered in relatively small chunks or short sessions in order to not exceed memory limits.[55] Rather than requiring employees to take the time to go through an entire course that may include information that is not helpful or needed, courses are being modularized or broken down into small chunks of learning.[56] Learners can skip content they are not interested in or can demonstrate mastery by completing tests. Chunking courses allows employees to save time and money by focusing on topics that they need for their job or want to learn.

Microlearning refers to training delivered in small pieces or chunks designed to engage trainees, motivate them to learn, and help facilitate retention.[57] The chunks of learning are presented using videos or games that are typically 5–8 minutes long. Microlearning is used to replace longer training courses with one or several short courses. It is also being used to reinforce or supplement formal training (e.g., sending quizzes after training, sharing short pieces of training content before the program to generate excitement) and to create just-in-time learning content. Survey results of talent professionals provide important insights into the use of microlearning.[58] Microlearning is most frequently delivered using videos, self-pace e-learning, or visuals such as PowerPoint slides or infographics. Quizzes, learners responding to scenarios, simulations, hands-on activities, or games tend to be used in microlearning. Microlearning is being used to replace longer courses that include technical content, focus on performance support or onboarding, or are considered mandatory and must be completed to meet compliance standards. Talent professionals report that the primary benefits of microlearning for learners focus on time; that is, learners can access learning when it is convenient for them, learning does not take a lot of time, and learners can access learning on-the-job when they need it. Also, trainees' progress in games or simulations can be tracked and reported, and microlearning content can be linked together based on topics or skills. The primary barrier for effective microlearning is that trainees are not held accountable for learning.

Consider how several different companies use microlearning.[59] Trainees at Avenade, a management consulting company, have access to minicourses that include topics like design thinking and leading the self. The courses are organized into either a progressive series or as pathways in which courses of related content can be taken in any order. All of the minicourses include learner guides, activities, reflection prompts, and an interactive discussion board. Trainees' reactions to the minicourses have been positive. They report that the minicourses allow them to fit learning into their busy schedules. CDK Global, a provider of computing services to automobile dealers, uses microlearning to support the performance of its sales team. Sales team members can access short podcasts while driving to visit their clients and make their own playlists based on the issues and situations they will encounter with their clients. American Dairy Queen uses microlearning for introducing new products and showing the ingredients and steps in the recipe. Trainees complete microlearning and then are able to review it before practicing making the product. USSI, a cleaning contract company, has many employees for whom English is not their first language. Training is delivered in 5-minute microlearning sessions, sometimes while employees are signing in to the company's time system. Some of the five-minute lessons cover English vocabulary, such as common phrases employees may need if they encounter an office tenant. In addition, USSI gives supervisors quick lessons in soft skills, such as handling difficult behavior.

If you are designing a new training course or program—or modifying an existing one—and you don't have the time or resources to apply all of the principles of microlearning, you can still help avoid overwhelming trainees with complex material during training by providing them with pretraining work that can be completed online or using workbooks.[60] For example, trainees can become familiar with the "basics" such as names, definitions, principles, and characteristics of components before they are trained in how the principles are applied (e.g., dealing with angry customers) or how a process works (e.g., testing for pathogens in a blood sample, changing a car's water pump). This will help free up cognitive resources so they can focus on and retain content covered during training.

Employees Need Feedback

Feedback is information about how well people are meeting the training objectives. To be effective, feedback should focus on specific behaviors and be provided as soon as possible after the trainee performs the behavior.[61] Also, positive trainee behavior should be verbally praised or reinforced. Videotape is a powerful tool for giving feedback. Trainers should view the videotape with trainees, provide specific information about how behaviors need to be modified, and praise trainee behaviors that meet objectives. Feedback can also come from tests and quizzes, on-the-job observation, performance data, a mentor or coach, written communications, or interpersonal interactions.

The specificity of the level of feedback provided to trainees needs to vary if trainees are expected to understand what leads to poor performance as well as good performance.[62] For example, employees may need to learn how to respond when equipment is malfunctioning as well as when it is working properly; therefore, feedback provided during training should not be so specific that it leads only to employee knowledge about equipment that is working properly. Less specific feedback can cause trainees to make errors that lead to equipment problems, providing trainees with opportunities to learn which behaviors lead to equipment problems and how to fix those problems. Difficulties encountered during practice as a result of errors or reduced frequency of feedback can help trainees engage more in exploration and information processing to identify correct responses.

Employees Learn through Observation, Experience, and Interaction

As mentioned earlier in the chapter, one way employees learn is through observing and imitating the actions of models. For the model to be effective, the desired behaviors or skills need to be clearly specified and the model should have characteristics (e.g., age or position) similar to the target audience.[63] After observing the model, trainees should have the opportunity in practice sessions to reproduce the skills or behavior shown by the model. According to adult learning theory, employees also learn best when they learn by doing,[64] which involves giving employees hands-on experiences or putting them with more experienced employees and providing them with the tools and materials needed to manage their knowledge gaps. One way to model behavior or skills is to show learners what to do using YouTube videos. For example, the Cheesecake Factory has videos of outstanding servers at work available at its Video Café.[65]

Employees also learn best through interaction—interacting with training content, with other learners, and with the trainer or instructor.[66] **Table 4.12** shows the three ways that employees learn through interaction and when to use them. **Learner–content interaction** means that the learner interacts with the training content. Learner–content interaction includes reading text on the web or in books, listening to multimedia modules, performing activities that require the manipulation of tools or objects (such as writing), completing case studies and worksheets, or creating new content based on learned information. Traditionally, all of the training content that employees needed came from trainers and the training and development department during formally scheduled courses. Today, one of the trends is for training content to include learner-generated content and to be available when trainees need it.[67] One example of learner-generated content are videos of work practices and processes captured on smartphones that can be shared with peers. Having trainees engage with the learning content helps build a mental model in memory that they can recall in the future. If trainees have difficulty, trainers should help them find where they can get the solution or answer so they are actively working on the problem.

TABLE 4.12 Three Types of Instructional Interaction

Type	When to Use
Learner-content	Requires mastering a task that is completed alone. Learn process of studying information and acting on it.
Learner-learner	Requires mastering a task that is completed in a group. Learners gain new knowledge or validate their understanding by discussing content with peers.
Learner-instructor	Best for in-depth topic exploration and to develop strengths in critical analysis and thinking. Discussion may be limited when large amounts of material need to be presented in a short timespan.

Sources: Based on J. Halls, "Move Beyond Words to Experience," *T+D,* February 2019, pp. 69–72; H. Nuriddin, "Building the Right Interaction," *T+D,* March 2010, pp. 32–35; D. Leonard and W. Swap, "Deep Smarts," *Harvard Business Review,* September 2004, pp. 88–97.

Learner-instructor interaction refers to interaction between the learner and the expert (trainer). Trainers can facilitate learning by presenting, demonstrating, and reinforcing content. Also, trainers provide support, encouragement, and feedback that are valued by most learners. Learner-instructor discussions can be useful for helping learners understand content, enhance their self-awareness and self-assessment, gain an appreciation for different opinions, and implement ideas on the job. To maximize learners' critical thinking and analysis skills, discussion should go beyond instructors asking questions and learners providing answers. Asking trainees to respond to and ask questions gets them to engage with the content and use prior knowledge, helping them create meaning from the experience and facilitates retention.[68] Using questions also helps the instructor gauge trainees' level of understanding or lack of confidence in a topic.

Learner-learner interaction refers to interaction between learners, with or without an instructor. Learner-learner interaction, including observing and sharing experiences with peers, may be especially useful for training interpersonal skills (such as communications), acquiring personal knowledge based on experience (such as tacit knowledge about how to close a sale or resolve a conflict), providing context-specific knowledge (such as managing in an international location), and learning to cope with uncertainty or new situations (such as marketing a new product or service).[69]

Consider how training at Farmers Insurance and General Motors gets learners actively involved and helps ensure transfer of training.[70] Farmers's "CE—It's Up to Me" training includes four online modules and short two-minute videos with supporting worksheets that allow employees to observe actual customer interactions, identify their impact on the interaction, and determine how they can improve the experience. Managers hold team meetings to discuss the training after trainees complete both the online modules and the short videos. At General Motors, district manager training includes face-to-face instruction; experiences in dealer operations, customer call centers, and after-sales centers; self-directed training; mentoring from more experienced district managers; and opportunities to share what they have learned with other trainees.

The type of instructional interaction should vary depending on the learning objectives.[71] For example, relying heavily on learner-instructor interaction may be best when training content must be provided to trainees in a required form such as training to comply with policies. Using both learner-instructor and learner-content interaction should be considered when teaching skills to inexperienced trainees, especially when the skills need to be performed in a specific order. This combination should be considered for learning manufacturing processes, basic customer service skills, performance management, basic sales skills, or software skills. This involves gaining the trainees' attention, teaching the skill, demonstrating it, having trainees practicing the skills, and then assessing the trainees' mastery level. All three types of instructional interaction shown in **Table 4.12** are appropriate if the purpose is to have trainees learn how to solve a problem they may encounter on-the-job that can have several possible solutions such as in making management decisions or advanced troubleshooting skills for servicing complex products. Trainees discover potential solutions by experiencing them. Trainers take on the role of facilitators and lead debriefings. Trainees share their solutions with each other. The trainer identifies the best solution and explains why that response is correct and the other responses are not.

Communities of practice (COPs) refers to groups of employees who work together, learn from each other, and develop a common understanding of how to get work accomplished.[72] COPs can involve face-to-face or electronic interaction. The idea of COPs suggests that learning occurs on the job as a result of social interaction. Every company has naturally occurring COPs that arise as a result of relationships that employees develop to accomplish work, and as a result of the design of the work environment. Leading Real Estate Companies of the World (LeadingRE) provides "CEO Exchange Groups," groups of principal and managing brokers of real estate companies who do not compete with each other.[73] They meet face-to-face or on conference calls several times each year to discuss challenges and opportunities they are facing and share best practices.

COPs also take the form of social networks, discussion boards, list servers, or other forms of computer-mediated communication in which employees communicate electronically. In doing so, each employee's knowledge can be accessed in a relatively quick manner. It is as if employees are having a conversation with a group of experts. Wyeth Pharmaceuticals has 11 COPs that focus on maintaining shop floor excellence.[74] The COPs make it easy for employees to share best practices, learn from one another, and improve business processes. The maintenance function used its COP to deliver more than 600 hours of training on new technology and maintenance processes. This has resulted in more reliable equipment and higher productivity, such as increasing equipment use in one manufacturing plant from 72 to 92 percent.

COPs are most effective for learning and improving work performance when managers and employees believe they contribute to the core operating processes of the company, such as engineering or quality.[75] Despite the benefits of improved communication, a drawback to these communities is that participation is often voluntary, so some employees may not share their knowledge unless the organizational culture supports participation. That is, employees may be reluctant to participate without an incentive or may be fearful that if they share their knowledge with others, they will give away their personal advantage in salary and promotion decisions.[76] Another potential drawback is information overload. Employees may receive so much information that they fail to process it, which may cause them to withdraw from the COP.

Employees Need the Training Program to Be Properly Coordinated and Arranged

Training coordination is one of several aspects of training administration. **Training administration** refers to coordinating activities before, during, and after the program.[77] Training administration involves:

1. Communicating courses and programs to employees.
2. Enrolling employees in courses and programs.
3. Preparing and processing any pretraining materials, such as readings or tests.
4. Preparing materials that will be used in instruction (e.g., copies of overheads, cases).
5. Arranging for the training facility and room.
6. Testing equipment that will be used in instruction.

7. Having backup equipment (e.g., paper copies of slides or an extra overhead projector bulb) should equipment fail.
8. Providing support during instruction.
9. Distributing evaluation materials (e.g., tests, reaction measures, surveys).
10. Facilitating communications between the trainer and trainees during and after training (e.g., coordinating exchange of e-mail addresses).
11. Recording course completion in the trainees' training records or personnel files.

Good coordination ensures that trainees are not distracted by events (such as an uncomfortable room or poorly organized materials) that could interfere with learning. Activities before the program include communicating to trainees the purpose of the program, its location, the name of a person to contact if they have questions, and any preprogram work they are supposed to complete. Books, speakers, handouts, and videotapes need to be prepared. Any necessary arrangements to secure rooms and equipment (such as virtual reality headsets) should be made. The physical arrangement of the training room should complement the training technique. For example, a team-building session will be less than effective if the seats cannot be moved for group activities. If visual aids will be used, all trainees should be able to see them. Make sure that the room is physically comfortable, with adequate lighting and ventilation. Trainees should be informed of starting and finishing times, break times, and the location of bathrooms. Distractions such as phone messages should be minimized, and trainees should be advised to turn off their cell phones and pagers. If trainees will be asked to evaluate the program or take tests to determine what they have learned, allot time for this activity at the end of the program. Following the program, the names of trainees who have completed the program should be recorded and credit given (if appropriate). Handouts and other training materials should be stored or returned to the consultant. The end of the program is also a good time to consider how the program could be improved if it will be offered again. Practical issues in selecting and preparing a training site and designing a program are discussed in more detail in **Chapter Five**.

Encourage Trainee Responsibility and Self-Management

Trainees need to take responsibility for learning and transfer,[78] which includes preparing for training, being involved and engaged during training, and using training content back on the job. Before training, trainees need to consider why they are attending training and set specific learning goals (either alone or, preferably, in a discussion with their manager) as part of completing an action plan (action plans are discussed in detail in **Chapter Five**). Also, trainees need to complete any pretraining assignments. During training, trainees need to be involved. That is, they need to participate and share experiences in discussions, to practice, and to ask questions if they are confused. After training, trainees need to review and work toward reaching the goals established in their action plan. They need to be willing to change (e.g., try new behaviors or apply new knowledge) and ask peers and managers for help if they need it.

Self-management refers to a person's attempt to control certain aspects of his or her decision making and behavior. Training programs should prepare employees to self-manage their use of new skills and behaviors on the job. Self-management involves:

1. Determining the degree of support and negative consequences in the work setting for using newly acquired capabilities.
2. Setting goals for using learned capabilities.
3. Applying learned capabilities to the job.
4. Monitoring use of learned capabilities on the job.
5. Engaging in self-reinforcement.[79]

Research suggests that trainees exposed to self-management strategies exhibit higher levels of transfer of behavior and skills than do trainees who are not provided with self-management strategies.[80]

Ensure That the Work Environment Supports Learning and Transfer

There is no magic "formula" for ensuring that transfer of training occurs. Effective strategies for transfer of training include ensuring that trainees are motivated and managers and co-workers support learning and transfer.[81] These strategies are especially important when training open skills; that is, when trainees have more choice about what and how to apply trained principles. Closed skills include prescribed behaviors that likely are less influenced by managers, peers, and the work environment. Also, designing training to increase knowledge and self-efficacy has a positive relationship with transfer of training.

Table 4.13 shows a list of obstacles in the work environment that can inhibit learning and transfer of training. They include (1) lack of support from peers and managers and (2) factors related to the work itself (e.g., time pressure).

TABLE 4.13 **Examples of Obstacles in the Work Environment That Inhibit Transfer of Training**

Work-Related Obstacles	Description of Influence
Time pressures Inadequate equipment Few opportunities to use skills Inadequate budget	Trainee has difficulty using new knowledge, skills, or behavior.
Lack of Peer Support	
Peers discourage use of new knowledge and skills on the job. Peers are unwilling to provide feedback. Peers see training as waste of time.	Peers do not support use of new knowledge, skills, or behavior.
Lack of Management Support	
Management does not accept ideas or suggestions that are learned in training. Management does not discuss training opportunities. Management opposes use of skills learned in training. Management communicates that training is a waste of time. Management is unwilling to provide reinforcement, feedback, and encouragement needed for trainees to use training content.	Managers do not reinforce training or provide opportunities to use new knowledge, skills, or behavior.

Sources: Based on J. Tracey and M. Tews, "Construct Validity of a General Training Climate Scale," *Organizational Research Methods* 8 (2005), pp. 353–74; R. D. Marx, "Self-Managed Skill Retention," *Training and Development Journal,* January 1986, pp. 54–57.

For example, new technologies allow employees to gain access to resources and product demonstrations using the Internet or notebook computers. But while employees are being trained to use these resources with state-of-the-art technology, they often become frustrated because comparable technology is not available to them at their work site. Employees' computers may lack sufficient memory or links to the Internet for them to use what they have learned.

These obstacles inhibit transfer because they cause lapses. **Lapses** take place when the trainee uses previously learned, less effective capabilities instead of trying to apply the capability emphasized in the training program. Lapses into old behavior and skill patterns are common. Trainees should try to avoid a consistent pattern of slipping back or using old, ineffective learned capabilities (e.g., knowledge, skills, behaviors, and strategies). Also, trainees should understand that lapses are common and be prepared to cope with them. Trainees who are unprepared for lapses may give up trying to use new capabilities—especially trainees with low self-efficacy and/or self-confidence.

One way to ensure that learning and transfer of training occurs is to ensure that the climate for transfer is positive. **Climate for transfer** refers to trainees' perceptions about a wide variety of characteristics of the work environment that facilitate or inhibit the use of trained skills or behavior. These characteristics include manager and peer support, the opportunity to use skills, and the consequences of using learned capabilities.[82] **Table 4.14** shows characteristics of a positive climate for transfer of training. Research has shown that transfer of training climate is significantly related to positive changes in managers' administrative and interpersonal behaviors following training. To support the transfer of financial training emphasizing Southwest Airlines's key business metrics, cost checklists explaining how employees can contribute to the company's bottom line are distributed companywide following training.[83] Flip charts showing highlights from manager–employee question-and-answer sessions are posted in work areas. All managers receive large posters displaying the company's four "magic numbers" (net income, unit cost measure, net margin, and invested capital). The posters include blank columns that managers are expected to complete and regularly update to show the past year's performance, the current year's goals, year-to-date numbers, and quarterly results.

TABLE 4.14 Characteristics of a Positive Climate for Learning and Transfer of Training

Characteristic	Example
Supervisors and co-workers encourage and set goals for trainees to use new skills and behaviors acquired in training.	Newly trained managers discuss how to apply their training on the job with their supervisors and other managers.
Task cues: Characteristics of a trainee's job prompt or remind him or her to use new skills and behaviors acquired in training.	The job of a newly trained manager is designed in such a way as to allow him or her to use the skills taught in training.
Feedback consequences: Supervisors support the application of new skills and behaviors acquired in training.	Supervisors notice newly trained managers who use their training.
Lack of punishment: Trainees are not openly discouraged from using new skills and behaviors acquired in training.	When newly trained managers fail to use their training, they are not reprimanded.
Extrinsic reinforcement consequences: Trainees receive extrinsic rewards for using new skills and behaviors acquired in training.	Newly trained managers who successfully use their training will receive a salary increase.
Intrinsic reinforcement consequences: Trainees receive intrinsic rewards for using new skills and behaviors acquired in training.	Supervisors and other managers appreciate newly trained managers who perform their job as taught in training.

Sources: J. B. Tracey, S. I. Tannenbaum, and M. J. Kavanagh, "Applying Trained Skills on the Job: The Importance of the Work Environment," *Journal of Applied Psychology* 80 (1995), pp. 235–52; E. Holton, "*What's Really Wrong*: Diagnosis for Learning Transfer System Change," in *Improving Learning Transfer in Organizations*, eds. E. Holton and T. Baldwin (San Francisco: Jossey-Bass, 2003), pp. 59–79.

Consider what AARP is doing to support learning and transfer.[84] AARP's CONNECT training program includes instructor-led courses, web-based training, peer teaching, social learning, and on-the job resources that promote transfer of what the trainees learned. Trainees focus on learning one competency such as decision-making or collaboration. To facilitate learning and transfer of training, trainees' managers provide support and encouragement. Managers whose employees are participating in the program are required to attend an online course that helps them become more effective coaches. Managers are asked to meet with the trainee before, during, and after the program to help them understand how their skills can be applied in their current job. For example, after trainees complete the course, their managers work with them to use their skills to help achieve department goals. Getting manager support and involvement has resulted in high levels of training transfer. Eighty-eight percent of managers and trainees report they have frequently used the skills they learned on the job.

Incentives can help create a positive climate for learning and transfer. Some companies are awarding micro-credentials or digital badges to employees who have completed courses, earned a certification, or mastered a skill.[85] **Microcredentials** are a competency-based and skill-focused form of credential that demonstrates skills, knowledge, and experience in a given subject area or capability. Microcredentials and digital badges are not necessarily the same. Microcredentials verify a person's knowledge or skills based on their successful completion of a course, activity, assignment, project, portfolio, or practical assessments. Digital badges refer to electronically displayed icons that symbolize a microcredential and may link to a description of what was earned.

Microcredentials vary in reputation. Microcredentials offered by online training providers such as Courseara or Udacity in conjunction with colleges, universities, and professional associations are highly valued. Also, microcredentials offered by technology companies such as IBM, Microsoft, or Google are recognized as significant. More valuable microcredentials provide information about proof of competency or are based on accreditation by a third-party organization.

The badges can be placed in the employee's personal profile, shared on social networks, and even put in a virtual backpack to take along to job interviews! Badges encourage learning in several ways. They provide feedback to trainees that they have completed the course or module or mastered a skill, and they provide an incentive to continue to learn in the future. Badges allow learners to display their achievements for their peers and social network to see, which encourages them to accomplish more. Also, badges help employees communicate to others what they know, which can help further their job and career opportunities. Badges are also beneficial to companies because they can be used to create a database identifying employees' knowledge and skills. The database can be used for quickly identifying employees with specific skills or knowledge needed for a project or work team. Also, the database gives an overall picture of the company's human capital (i.e., areas of knowledge and skills strengths and weaknesses).

At professional services firm EY, employees can earn badges through completing training in a number of different areas including artificial intelligence, blockchain, innovation, analytics, teaming, and transformational leadership.[86] The EY Badges initiative encourages employees to gain the skills they need today and in the future to provide the appropriate services and advice to EY clients. To acquire a badge, employees have to complete a combination of online learning modules and apply the knowledge they learned. The badges have four levels: bronze, silver, gold, and platinum. A bronze badge demonstrates basic knowledge in an area. Silver, gold, and platinum badges require having basic knowledge, applying the skill to specified job experiences, and contributing back to the company through using the skills in projects or client interactions. Employee at EY value earning badges and often share their accomplishments on social media.

Instructional Emphasis for Learning Outcomes

This chapter's discussion of the implications of the learning process for instruction provides general principles regarding how to facilitate learning. However, you should understand the relationship between these general principles and the learning process. Different internal and external conditions are necessary for learning each outcome. **Internal conditions** refers to processes within the learner that must be present for learning to occur. These processes include how information is registered, stored in memory, and recalled. **External conditions** refers to processes in the learning environment that facilitate learning. These conditions include the physical learning environment, as well as opportunities to practice and receive feedback and reinforcement. The external conditions should directly influence the design or form of instruction. **Table 4.15** shows what is needed during instruction at each step of the learning process. For example, during the process of committing training content to memory, verbal cues, verbal links to a meaningful context, and diagrams and models are necessary. If training content is not coded (or is incorrectly coded), learning will be inhibited.

TABLE 4.15 Internal and External Conditions Necessary for Learning Outcomes

Learning Outcome	Internal Conditions	External Conditions
Verbal Information		
Labels, facts, and propositions	Previously learned knowledge and verbal information Strategies for coding information into memory	Repeated practice Meaningful chunks Advance organizers Recall cues
Intellectual Skills		
Knowing how	Mastery of prerequisites Recall of prerequisites	Link between new and previously learned knowledge Skills taught in order from simple to complex Provide a variety of examples and practice opportunities
Cognitive Strategies		
Process of thinking and learning	Recall of prerequisites, similar tasks, and strategies	Verbal description of strategy Strategy demonstration Practice with feedback Variety of tasks that provide opportunity to apply strategy
Attitudes		
Choice of personal action	Mastery of prerequisites Identification with model Cognitive dissonance	Demonstration by a model Positive learning environment Strong message from credible source Reinforcement
Motor Skills		
Muscular actions	Recall of part skills Coordination program	Practice Demonstration Gradual decrease of external feedback

Source: Based on R. M. Gagne and K. L. Medsker, *The Conditions of Learning* (Fort Worth, TX: Harcourt-Brace College Publishers, 1996).

The training programs of the Culinary Institute of America (CIA) help to illustrate many of the internal and external conditions necessary to achieve learning outcomes. With campuses in New York, California, Texas, and Singapore, the CIA is the world's finest training facility for chefs and has approximately 2,000 full-time students in its degree programs. CIA graduates are chefs in some of the best restaurants in the world and in prestigious private dining rooms (such as the White House), and they direct food service operations for large hotel chains such as the Marriott, Hyatt, Radisson, and Hilton. For example, you might have heard of Cat Cora, the Iron Chef on the television show *Iron Chef America*. Besides offering degree programs, the CIA also hosts more than 6,000 trainees from a wide variety of companies that have food service operations.

Whether an instructor is teaching meat-cutting or sautéing techniques, the learning environments of CIA programs are basically the same. A lecture is followed by demonstration and several hours of guided hands-on practice. The trainee then receives feedback from the instructor. The trainer moves from a show-and-tell approach to become a coach over the course of the training session. Videos are produced for every class and given to students. Whether viewed from residence halls or seen at the video learning center, students review the tapes at their own pace and control what they see.

CIA programs deal not only with cognitive learning, but also with physical and emotional learning. In addition to cooking and baking courses, students are required to study psychology, total quality management practices, languages, marketing, communications, restaurant management, and team supervision. Food ethics, sustainability, physical fitness, and stress management also are required parts of the curriculum. Why? Running a commercial kitchen involves long hours and high levels of stress—it is very physically demanding. Thanks to the learning environment created at the CIA, the institute is recognized as the world leader in gastronomic training, providing a foundation of basic knowledge for chefs from around the world.[87]

Summary

Learning and transfer of learning must occur for training to be effective. This chapter began by defining learning and transfer of learning and identifying the capabilities that can be learned: verbal information, intellectual skills, motor skills, attitudes, and cognitive strategies. To explain how these capabilities can be learned, the chapter discussed several theories of learning: reinforcement theory, social learning theory, goal setting theory, need theories, expectancy theory, adult learning theory, and information processing theory. To understand how to ensure that what is learned is applied to the job, three transfer of training theories were discussed: identical elements, stimulus generalization, and cognitive theory. Next, the chapter investigated the learning process and its implications for how people learn. The section on learning process emphasized that internal processes (expectancy, storage, and retrieval), as well as external processes (gratifying), influence learning. The chapter then discussed the relationship between the implications of the learning process, transfer of training, and the design of instruction. Important design elements include providing learners with an understanding of why they should learn, meaningful content, practice opportunities, feedback, opportunities for interaction, and a coordinated program. Also, the training design should encourage learners to self-manage and ensure that the learners' work environment supports learning and transfer. Microcredentials and badges are ways that employees can be incentivized to learn.

Key Terms

learning *153*
transfer of training *153*
generalization *153*
maintenance *153*
verbal information *155*
intellectual skills *155*
motor skills *155*
attitude *155*
cognitive strategies *155*
reinforcement theory *156*
social learning theory *156*
self-efficacy *157*
verbal persuasion *157*
logical verification *157*
modeling *157*
past accomplishments *157*
goal setting theory *158*
goal orientation *159*

learning orientation *159*

performance orientation *159*

need *159*

expectancy *160*

instrumentality *160*

valence *160*

andragogy *161*

closed skills *163*

open skills *163*

theory of identical elements *163*

fidelity *165*

near transfer *165*

stimulus generalization approach *165*

far transfer *165*

key behavior *165*

cognitive theory of transfer *165*

perception *166*

working storage *166*

semantic encoding *167*

rehearsal *167*

organizing *167*

elaboration *167*

retrieval *167*

generalizing *167*

gratifying *167*

instruction *168*

objective *168*

training context *170*

practice *171*

metacognition *171*

self-regulation *171*

advance organizers *171*

overlearning *172*

error management training *172*

massed practice *173*

spaced practice *173*

overall task complexity *173*

mental requirements *173*

physical requirements *173*

whole practice *173*

part practice *173*

reflection *175*

automatization *175*

boosters *176*

microlearning *176*

feedback *177*

learner-content interaction *177*

learner-instructor interaction *178*

learner-learner interaction *178*

community of practice (COP) *179*

training administration *179*

self-management *180*

lapse *181*

climate for transfer *182*

microcredentials *183*

internal conditions *184*

external conditions *184*

Discussion Questions

1. Compare and contrast any two of the following learning theories: expectancy theory, social learning theory, reinforcement theory, and information processing theory.
2. What learning condition do you think is most necessary for learning to occur? Which is least critical? Why?
3. Are learning and transfer of training related? Explain why or why not.
4. How do instructional objectives help learning to occur?
5. Assume that you are training an employee to diagnose and repair a loose wire in an electrical socket. After demonstrating the procedure to follow, you let the trainee show you how to do it. The trainee correctly demonstrates the process and repairs the connection on the first attempt. Has learning occurred? Justify your answer.
6. Your boss says, “Why do I need to tell you what type of learning capability I’m interested in? I just want a training program to teach employees how to give good customer service!” Explain to the boss how “good customer service” can be translated into different learning outcomes.

7. How does practice help learning? What could a trainer do in a training session to ensure that trainees engage in self-regulation?
8. Can allowing trainees to make errors in training be useful? Explain.
9. What learning conditions are necessary for short- and long-term retention of training content to occur?
10. What is microlearning? How does it help to enhance learning and transfer of training?
11. What is near transfer? Far transfer? What are their implications for training design?
12. How can employees learn through interaction? Are some types of interaction best for learning in some situations but not others? Explain.
13. How can the work environment inhibit learning and transfer of training? Explain. In your opinion, what work environment characteristics have the largest influence on transfer of training? Justify your answer.
14. You have a one-day classroom experience in which you need to help a group of engineers and software programmers learn to become project managers. After training, they will have to manage some significant projects. Discuss the instructional characteristics and activities you will use to ensure that the engineers and software programmers learn project management.
15. Companies are providing employees with digital badges and microcredentials after they complete a training course or series of courses. Explain how badges and microcredentials influence learning from the perspective of one of the following theories: expectancy theory, need theory, goal setting theory, or adult learning theory.

Application Assignments

1. Using any source possible (magazines, journals, personal conversation with a trainer, etc.), find a description of a training program. Consider the learning process and the implications of the learning process for instruction discussed in the chapter. Evaluate the degree to which the program facilitates learning. Provide suggestions for improving the program.
2. You are the training director of a hotel chain, Noe Suites. Each Noe Suites hotel has 100 to 150 rooms, a small indoor pool, and a restaurant. Hotels are strategically located near the exit ramps of major highways in college towns such as East Lansing, Michigan, and Columbus, Ohio. You receive the following e-mail message from the vice president of operations. Prepare an answer.

    To: You, Training Director

    From: Vice President of Operations, Noe Suites

    As you are probably aware, one of the most important aspects of quality service is known as "recovery"—that is, the employee's ability to respond effectively to customer complaints. There are three possible outcomes to a customer complaint: The customer complains and is satisfied by the response; the customer complains and is dissatisfied with the response; and the customer does not complain but remains dissatisfied. Many dissatisfied customers do not complain because they want to avoid confrontation, there is no convenient way to complain, or they do not believe that complaining will do much good.

    I have decided that to improve our level of customer service, we need to train our hotel staff in the "recovery" aspect of customer service. My decision is based on the results of recent focus groups we held with customers. One theme that emerged from these focus groups was that we had some weaknesses in the recovery area. For example, last month in one of the restaurants, a waiter dropped the last available piece of blueberry pie on a customer as he was serving her. The waiter did not know how to correct the problem other than offer an apology.

I have decided to hire two well-known consultants in the service industry to discuss recovery, as well as to provide an overview of different aspects of quality customer service. These consultants have worked in service industries and manufacturing industries. I have scheduled the consultants to deliver a presentation in three training sessions. Each session will last three hours. There will be one session for each shift of employees (day, afternoon, and midnight shift). The sessions will consist of a presentation and question-and-answer session. The presentation will last one-and-a-half hours, and the question-and-answer session approximately 45 minutes. There will be a half-hour break.

My expectations are that following this training, the service staff will be able to recover successfully from service problems.

Because you are an expert on training, I want your feedback on the training session. Specifically, I am interested in your opinion regarding whether our employees will learn about service recovery from attending this program. Will they be able to recover from service problems in their interactions with customers? What recommendations do you have for improving the program?

3. Identify what is wrong with each of the following training objectives. Then rewrite it.
   a. To be aware of the safety rules for operating the ribbon-cutting machine in three minutes.
   b. Given a personal computer, a table, and a chair, enter the data into a Microsoft Excel spreadsheet.
   c. Use the Internet to learn about training practices.
   d. Given a street address in the city of Dublin, Ohio, be able to drive the ambulance from the station to the address in less than 10 minutes.
4. Watch the YouTube video of a flight simulator at www.youtube.com/watch?v=fujLrWsAp8c. Are the skills developed in the flight simulator open or closed skills? What transfer of training theory was applied to develop the flight simulator? Does the flight simulator encourage near or far transfer? Explain your answers.
5. Go to www.allencomm.com/portfolio/dominos for an example of training for new employees developed by AllenComm for Domino's Pizza. Review the examples of the Pizza Maker course that are provided. What features does the Pizza Maker course include that help to enhance learning and transfer of training? Identify each feature and discuss how it enhances learning, transfer of training, or both.
6. Watch "Front Desk First Impressions" at www.youtube.com/watch?v=s3aR3yP4aKg, a video used to train hotel front desk associates. What features of this video can help trainees learn and transfer what they have learned to their jobs? If you were conducting this training program how would you use this video? In addition to the video, what else would you add to the training program to make it more effective?
7. Watch the YouTube video showing examples of microlearning at www.youtube.com/watch?v=FT8H-jp4jnM. What features included in these examples help to enhance learning and transfer of training?
8. Take the BuzzFeed quiz on multitasking at www.youtube.com/watch?v=txWeSnJBT-M. How did you do? Could this be why driving and doing other things like eating, texting, or putting on makeup (yes, I've observed this while driving) is dangerous. Have you found it difficult to multitask in your life? Explain why. Next, watch the YouTube video on multitasking at www.youtube.com/watch?v=iM4u-7Z5URk to see why it is difficult to multitask. Since our brains have difficulty multitasking, what are the

implications of this for training, particularly training that trainees can access anytime, anywhere, using smartphones, tablets, or notebook computers?

9. Watch the video showing flight attendant training at www.youtube.com/watch?v=a8lbitoBhP4. What characteristics of the training shown in this video help learning? Transfer of training?
10. Watch the video on Google's experience of how their employees learn at www.youtube.com/watch?v=nhD-rojP11M. What features of learning shown in **Table 4.5** are emphasized in this video? Explain the feature and provide an example of it from the video.
11. Watch the video "EY Badges" at www.youtube.com/watch?v=EiYvF8qx528. Do you think that this initiative motivates EY employees to learn new skills? Explain your answer. How would you determine if the EY Badges was effective or not? That is, what would you study or measure?

Case: *Revised Training for the U.S. Navy*

In 2017, 17 U.S. Navy sailors died in collisions involving its ships. Congressional investigations identified inadequate training in the foundational skills of seamanship as one of the likely causes for the collisions. The Navy is revising training methods for more than 75 percent of its occupations. Most of the training curriculum is hands-on work with simulations and interactive courseware with 20 percent being lecture. For example, during bootcamp the Navy has reduced the amount of time new recruits spend in the classroom and instead focus more on experiential learning to simulate conditions aboard a ship in war or peacetime. Recruits now participate in 177 hours of hands-on training during the eight weeks at boot camp, an increase of 17 hours. Officers in charge of bootcamp divisions of approximately 88 recruits evaluate their division's weaknesses and use time to have them practice skills such as tying knots to anchor a ship rather than participate in online learning. The training involves doing multiple repetitions of the skills to ensure they are retained. Recruits spend two days on a life-size replica of a deck of a ship. The recruits practice tying lines, relaying orders, getting a ship underway, and bringing it back to port. During practice, instructors ring a bell every time recruits make a mistake. To graduate, recruits must pass an all night test in a simulator designed like the deck and hull of a warship. There are explosions to deal with, leaking pipes to repair, and fires to extinguish. The Navy is also providing specialized training after sailors finish boot camp.

What instructional characteristics does the Navy's new training program include that facilitate learning and transfer? List each of the characteristics and explain how it enhances learning and transfer. What transfer of training theory has been used to design the training? Explain the theory and how it is being used in the training. Explain how a community of practice (COP) could be beneficial for Navy training.

Sources: Based on L. Weber, "How the Navy Revamped Boot Camp," *The Wall Street Journal,* March 30, 2020, pp. R4, R5; "Recruit Training Command," from www.bootcamp.navy.mil, accessed March 5, 2021; R. Powers, "Navy Boot Camp," The Balance Careers, October 21, 2019, from the www.thebalancecareers.com, accessed March 5, 2021; "What Should I Expect at Navy Basic Training?" Indeed, February 4, 2020, from indeed.com, accessed March 5, 2021.

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CHAPTER FIVE

Program Design

Objectives

After reading this chapter, you should be able to

5-1 Choose and prepare a training site based on how trainees will be involved and interact with the content and each other in the course.
5-2 Prepare for instruction using a curriculum road map, lesson plan, design document, and concept map.
5-3 Explain how trainees' age, and personality might influence how programs are designed.
5-4 Prepare a request for proposal (RFP) and a list of questions to evaluate training consultants and suppliers.
5-5 Explain the program design elements that should be included to ensure near and far transfer of training.
5-6 Develop a self-management module for a training program.
5-7 Design application assignments and action plans to enhance learning and transfer of training.
5-8 Make recommendations about what managers can do before, during, and after training to facilitate learning and transfer.
5-9 Identify different ways to manage knowledge and the conditions necessary for employees to share knowledge.

Designing Learning with the Learners in Mind

Haskell provides construction, engineering, and architecture services in the United States and 12 other countries. The company faced the challenge of ensuring that team members had the necessary technical training and skills to support the company's growth in customers and their projects. To help meet this challenge, Haskell developed a new online technical training program. The training focuses on technical, safety, and quality knowledge and skills. Previously, training in technical skills was delivered only in-person twice each year. The new program provides blended, on-demand, online training to the company's global field and support workforce. This reduces their need to travel to a central training location. It also gives them the opportunity to learn when and where it is convenient for them to do so. The training is based on microlearning principles combined with an annual hands-on component. The training includes 3–15 minute modules. The hands-on sessions provide the opportunity for skills practice within 2–4 months of online training completion. Quality and Safety professionals and subject-matter experts (SMEs) at job sites help the trainees further develop the skills and apply the knowledge emphasized in the online training.

Sources: Based on "Best Practices & Outstanding Training Initiatives," Haskell: Haskell Online–Blended Technical Training Program, *training,* March/April 2020, pp. 81–82; "About Haskell," from www.haskell.com, accessed January 17, 2021.

Introduction

As emphasized in **Chapter Four**, "Learning and Transfer of Training," for learning and transfer of training to occur, training programs need to include meaningful material, clear objectives, opportunities for practice and feedback, learner interaction, and a supportive work environment. However, these features are not enough to create an effective training program. An effective training program also needs a high-quality program design to maximize trainee learning and transfer of training. **Program design** refers to the organization and coordination of the training program. For example, the chapter opener shows how training at Haskell ensures that trainees are actively involved in learning, meaningful content is provided, and programs and courses are logically designed.

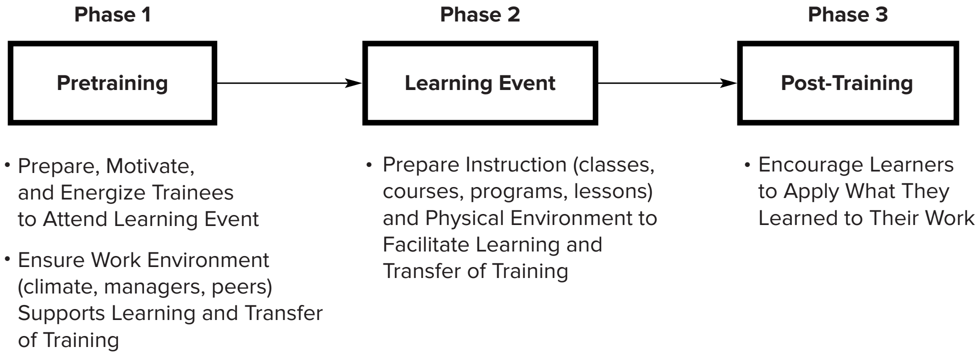
One of the first questions you may have is how long does it take to develop training? The typical standard for determining this is to consider how long it takes to develop one hour of training. In a survey of training professionals, responses to this question show that it depends on the type of training.[1] For example, on average it takes 67 hours to develop 23 minutes of face-to-face, instructor-led training. The range of average time for developing online learning is between 48 hours, for passive instruction in which the learner just takes in information, and over 155 hours, for more active instruction in which the learner interacts with games, scenarios, or simulations. On average, a 6-minute microlearning module that may include podcasts, infographics, e-learning, and videos takes 18 hours to develop. Keep in mind that although designing more active instruction in online courses takes more time, as you might suspect, it tends to lead to more learning and transfer of training!

It is important to take a broad perspective when designing training, regardless of whether it is an online or a face-to-face training program, class, or course. Employees must be motivated to attend training events; use what they learn on their job; share their knowledge and skills with others; and continue to shape and modify the knowledge and skills acquired to meet changing business and job demands. This means that, in addition to including what goes on during training based on course and lesson plans, training design should also create conditions before the training event to ensure that trainees are willing, ready, and motivated to learn knowledge and skills. In addition, program design should include taking steps to ensure that after training, the acquired knowledge and skills are used on the job and shared with other employees.

Figure 5.1 shows the three phases of the program design process: pretraining, the learning event, and post-training. As discussed in **Chapter Three**, "Needs Assessment," information collected during the needs assessment is important in identifying appropriate pretraining activities, designing the learning event, and helping to ensure that transfer of training occurs after training ends. Phase 1, pretraining, involves preparing, motivating, and energizing trainees to attend the learning event. Phase 1 also involves ensuring that the work environment (i.e., climate, managers, and peers) supports learning and transfer. Phase 2, the learning event, involves preparing instruction (classes, the overall program) and the physical environment to facilitate learning. Phase 2 focuses on creating a positive learning environment, including planning the activities that occur during training, selecting a high-quality instructor or trainer, choosing a training room and creating positive interaction with learners, and having a proper program design. Phase 3, post-training, refers to transfer of training, or getting learners to apply what they have learned to their work. Typically, most effort, attention, and financial resources tend to be devoted to designing and choosing the learning event itself.[2] However, what happens before the learning event (pretraining) and after the learning event (post-training) may be equally, if not more, important in determining if learners are motivated to learn, acquire new knowledge and skills, and apply, share, and use what they have learned.

Consider how Progressive Insurance's program for new leaders uses the three phase process.[3] The program known as Leadership Launch consists of a three-day class accompanied by prework and postclass activities. All new leaders at Progressive take the course within six months of starting a new position. To begin, trainees complete a leadership assessment and an e-learning module on coaching. The training and development team

FIGURE 5.1 The Program Design Process



Sources: Based on B. Moser, "Train, Transfer, Sustain," *Chief Learning Officer,* November 2019, p. 18; J. Last, "Embrace Extended Learning," *T+D,* November 2019, pp. 69–72; M. Weinstein, "Crafting a Holistic Approach to Learning," *training,* March/April 2018, pp. 26–29; J. Zenger, J. Folkman, and K. Sherwin, "The Promise of Phase 3," *T+D,* January 2005, pp. 31–34; R. Hewes, "Step by Step," *T+D,* February 2014, pp. 56–61.

also sends the trainees' manager a guide two weeks before start of the course. The guide includes a course summary and checklist of activities to complete with trainees before and after the course. Learners also have access to a website for the course that includes frequently asked questions and introduces the program's instructors and content. During the course, trainees complete lessons and activities on a variety of leadership topics. A variety of activities are provided to support transfer of what they learned to their work. For example, an action plan is completed by trainees. Using the action plan, at the end of each topic, trainees list their current strengths and behaviors they want to continue as well as behaviors they want to begin doing and those they should stop doing. The action plans provide trainees with a plan for applying lessons from the course on the job. After they complete the course, the trainees' managers again receive a message that highlights the list of potential postcourse activities they can engage in with the trainees to reinforce what they learned in the course and to help implement their action plans.

The training and development team is also involved in ensuring transfer of training occurs. They prompt participants via e-mail to do small reinforcement activities. The activities include everything from watching short videos to answering trivia questions. Trainees typically complete two to three of these activities per week for 12 weeks after attending the course. Trainees are encouraged to join a one-hour conference call 60 days after the course ends to share their progress on implementing the plans laid out in their action plans and ask questions about others' progress. Using the three phase process has provided positive results. Survey results show that trainees have applied the concepts taught during training, consider themselves more effective leaders after the program, and their peers and direct reports believe they are more effective leaders compared to before they completed the program.

This chapter discusses important program design issues that relate to the three phases of the instructional process. It begins by discussing important considerations in effective program design, including selecting and preparing the training site, identifying and choosing the best trainers, and how trainers can arrange the training site and create an instructional environment that is conducive to learning. Next, the chapter introduces you to curricula, courses, and lessons and shows how to manage learning projects and use design documents and lesson plans. Also discussed are important post-training issues related to transfer of training, including how to create a supportive work environment, provide trainees with self-management skills, and gain manager and peer support. The following two sections of the chapter discuss content curation and how to identify and choose a vendor or consultant for training services. Content curation is important because training content needs to be periodically reviewed to insure that it is relevant, current, and easily accessible by trainees.

Understanding how to evaluate vendors and consultants who provide training is important because they are related on by many companies which do not have the staff, resources, or expertise needed to design training programs. The chapter concludes with a discussion of the significant role knowledge management plays in facilitating learning and transfer of training.

Considerations in Designing Effective Programs

Selecting and Preparing the Training Site

The **training site** refers to the room where training will be conducted. A good training site offers the following features:[4]

1. It is comfortable and accessible.
2. It is quiet, private, and free from interruptions.
3. It has sufficient space for trainees to move around easily, offers enough room for trainees to have adequate work space, and has good visibility for trainees to see each other, the trainer, and any visual displays or examples that will be used (e.g., videos, product samples, charts, and slides).

Training sites can be on-site in a training room located at company offices or off-site at a hotel, resort, conference center, or college campus. There is no right answer as to whether training should be held on-site or off-site. Both on-site and off-site trainings have potential benefits that need to be considered.[5] The benefits of on-site training include actual and perceived savings of transportation, food and beverage costs, and space and equipment rental costs; and ease of using local employees to serve as instructors for some or part of the training. The benefits of off-site training include less chance of business-related disruptions, resulting in improved trainee focus; a more memorable training setting and experience; providing a message that the company values training by investing in it; and better opportunities for networking. For example, leaving the office for off-site training provides a mental and physical break from work that can help trainees focus on learning rather than being distracted by interruptions from staff and customers. Regardless of the location, to improve their focus on training content, trainers need to ask learners to turn off their cell phones (unless they are being used for learning purposes).

Details to Be Considered in the Training Room

Table 5.1 presents characteristics of the meeting room that a trainer, program designer, or manager should use to evaluate a training site. Keep in mind that many times, trainers do not have the luxury of choosing the "perfect" training site. Rather, they use their evaluation of the training site to familiarize themselves with the site's strengths and weaknesses in order to adjust the training program and/or physical arrangements (e.g., re-arrange the trainer's position so it is closer to electrical outlets needed to run equipment).

Recognizing that trainee learning can be facilitated though both mental and physical involvement, it is important to consider this when choosing, designing, or deciding how to use a training space. For example, Blue Cross Blue Shield of Michigan has transitioned to classrooms with spaces that can be configured as needed.[6] Because training classes might involve online learning, teamwork, physical movement, and quiet contemplation, spaces need flexible furniture and equipment that can be moved within the class (or moved out altogether to create more space). The key is to have a classroom that is able to accommodate a wide variety of activities and instructor–learner, learner–learner, and learner–content interactions. For example, in a sales course, learners work with a partner. They physically walk through the sales process using a map on the floor outlining the steps in the process. The physical movement through the steps has helped learners better recall the sales process. When choosing training spaces—whether on-site or off-site at a conference site

TABLE 5.1 Details to Consider When Evaluating a Training Room

Noise. Check for noise from heating and air conditioning systems, adjacent rooms and corridors, and outside the building.
Colors. Pastel hues such as oranges, greens, blues, and yellows are warm colors. Variations of white are cold and sterile. Black and brown shades will close the room in psychologically and become fatiguing.
Room structure. Use rooms that are somewhat square in shape. Are the rooms and seating tiered? Long, narrow rooms make it difficult for trainees to see, hear, and participate in the discussion. Check for the availability and proximity of breakout or case rooms if needed.
Lighting. The main source of lighting should be fluorescent lights. Incandescent lighting should be spread throughout the room and used with dimmers when projection is required.
Wall and floor covering. Carpeting should be placed in the meeting area. Solid colors are preferable because they are not distracting. Only meeting-related materials should be on the walls.
Meeting room chairs. Chairs should have wheels, swivels, and backs that provide support for the lower lumbar region.
Glare. Check and eliminate glare from metal surfaces, TV monitors, and mirrors.
Ceiling. Ten-foot-high ceilings are preferable.
Electrical outlets. Outlets should be available every six feet around the room. Outlets for the trainer should be available as well. Make sure that outlets are available for trainees to plug in their laptops, if necessary.
Acoustics. Check the bounce or absorption of sound from the walls, ceiling, floor, and furniture. Try voice checks with three or four different people, monitoring voice clarity and level.
Technology. Check that the room has permanent retractable screens and a computer with Internet access for the trainer (and for trainees if needed).

Sources: Based on M. Weinstein, "Training Spaces," *training,* September/October 2010, pp. 34–37; C. L. Finkel, "Meeting Facilities," in the *ASTD Training and Development Handbook*, 3d ed., ed. R. L. Craig (New York: McGraw-Hill, 1996), pp. 978–989.

or hotel—trainers at The Economical Insurance Group (TEIG) consider the size of the room needed for the number of trainees attending and ensure that the physical space is engaging to the learner and promotes a sense of community between the facilitator and the instructor. They make certain that the training space can incorporate a blend of technology-based media (such as graphics, multimedia, flash technology, and immediate feedback tools) and face-to-face training methods (such as roundtable discussions among small groups of trainees). Also, for courses such as leadership training, the environment outside the classroom needs to be comfortable (e.g., quiet areas, gardens, and lounge chairs) to encourage networking, creativity, and innovation.

Sometimes, trainers may find themselves having to work in a training space that is not ideal. At Century 21 Real Estate LLC, trainers make sure that they get a look at the space before the training course to consider its strengths and limitations and how to use it to best maximize learning. For example, at one training session held at a local hotel, trainers had to work around banquet tables. As a result, they decided to get trainees energized and involved by using a team exercise that trainees seated at each table could work on. Trainers at Steelcase modified its classrooms so that content is projected from different sides of the room and not just from the front, so learners look over one another.[7] Instructors can be anywhere in the room because they can use a switcher to project content from any student's or instructor's laptop to any or all screens in the room. Also, in addition to classrooms, Steelcase has cafés, booths, and small rooms to encourage collaboration and knowledge sharing, as well as areas for quiet, individual work.

Seating Arrangements

Seating arrangements at the training site should be based on an understanding of the desired type of trainee interaction and trainee-trainer interaction.[8] **Figure 5.2** shows several types of seating arrangements.

Fan-type seating is conducive to allowing trainees to see from any point in the room. Trainees can easily switch from listening to a presentation to practicing in groups, and trainees can communicate easily with everyone in the room. Fan-type seating is also effective for training that includes trainees working in groups and teams to analyze problems and synthesize information.

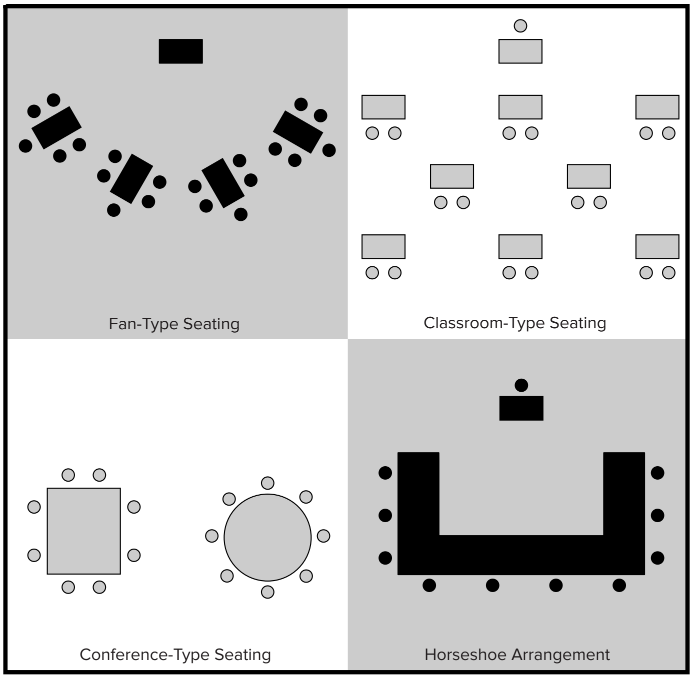
If the training primarily involves knowledge acquisition, with lecture and audiovisual presentation being the primary training method, traditional classroom-type seating is appropriate. Traditional classroom instruction allows trainee interaction with the trainer, but it also makes it difficult for trainees to work in teams (particularly if the seats are not movable to other locations in the room).

If training emphasizes total-group discussion with limited presentation and no small-group interaction, a conference-type arrangement may be most effective. If the training requires both presentation and total-group instruction, the horseshoe arrangement is useful.

Choosing Trainers

Selecting professional trainers or consultants is one obvious possibility for companies. Trainers, whether from inside or outside the company, should have expertise in the topic and experience in training.[9] Train-the-trainer programs are necessary for managers, employees, and "experts" who may have content knowledge but need to

FIGURE 5.2 **Examples of Seating Arrangements**



Source: Based on F. H. Margolis and C. R. Bell, *Managing the Learning Process* (Minneapolis, MN: Lakewood Publications, 1984).

improve presentation and communications skills, gain an understanding of the key components of the learning process (e.g., feedback, practice), or learn to develop lesson plans. This may involve having employees and managers earn a certificate verifying that they have the skills needed to be effective trainers. To increase their chances of success in their first courses, new trainers should be observed and should receive coaching and feedback from more experienced trainers. When companies use in-house experts for training, it is important to emphasize that these experts convey training content in as concrete a manner as possible (e.g., use examples), especially if the audience is unfamiliar with the content. Experts may have a tendency to use more abstract and advanced concepts that may confuse trainees.[10]

In-house experts should be encouraged to talk about their experiences and background and use activities that reinforce what trainees are learning. Also, they need to facilitate discussions and answer trainees' questions. To overcome in-house experts' lack of instructional skills and lack of interest in leading a training session, you might want to consider having them co-train with an instructor. That way, the instructor can focus on the flow of the training session and the in-house expert can do what he or she does best—share expertise and real-world examples.

Using managers and employees as trainers may help increase the perceived meaningfulness of the training content. Because they understand the company's business, employee and manager trainers tend to make the training content more directly applicable to the trainees' work. Also, having managers and employees lead training sessions can help increase their support for learning and reduce the company's dependency on expensive outside consultants. Serving as trainers can be rewarding for employees and managers if they are recognized by the company, or if the training experience is linked to their personal development plans.

At AstraZeneca China, trainers meet with managers who are involved in training at least three times to help develop an appropriate "language" that most effectively motivates their audience.[11] During the meetings and workshops, the trainers also provide real-time guidance for the managers to make adjustments according to the reactions of the audience. Some negative reactions may be an insensitivity to some of the core corporate values and purposes of training or result from potential difficulties and challenges in the implementation of the trained tasks. In these situations, trainers might suggest that managers encourage the trainees to adopt a personal development perspective by sharing difficulties they have faced in their careers and how overcoming these difficulties helped them grow.

At Florida Blue, a member company of the Blue Cross Blue Shield Association, health insurance is a seasonal business that peaks during the annual and open enrollment periods for Medicare and the Affordable Care Act.[12] In preparation, the learning and development team must add new trainers and content designers so it can upskill the various sales and service teams. If Florida Blue permanently hired the trainers needed during to prepare for the peak periods, that would result in cost increases that would have to be passed on to the customer. Instead, to meet the need for temporary trainers, Florida Blue used high-performing sales and service employees. The temporary trainers attend a trainer certification program to prepare them. Most of them return to their sales and service positions after filling the need but some become full-time trainers. During the demand period, Florida Blue's learning and development team uses independent contract designers who can help when needed.

How Trainers Can Make the Training Site and Instruction Conducive to Learning

As a trainer, you can take several steps before and during training to make the room and instruction conducive to learning.[13]

Creating a Learning Setting

Before choosing a training room, consider how the trainees are expected to learn. That is, determine the extent to which trainees decide when, where, and how they will learn (self-direction), and whether learning will occur by interaction with others (collaboration).[14] **Table 5.2** describes the types of training rooms that are appropriate for the amount of self-direction and collaboration necessary for learning. For example, a classroom with easy-to-move furniture supports high collaboration but low self-direction; this classroom can be used for lectures, presentations, discussions, and small groups. A distance learning room that includes computers, cameras, and data equipment supports learning that requires low collaboration but high self-direction. Self-directed learning that requires little collaboration is best suited for labs equipped with computers and software that support online learning, computer-based training, or software instruction. Of course, a dedicated training space may not be necessary for these learning requirements because trainees can work from their own personal computers, at home or at work. The advantages and disadvantages of online learning are discussed in **Chapter Eight**, "Technology-Based Training Methods," but be aware that employees may not like the lack of face-to-face collaboration that occurs in online learning programs.

TABLE 5.2 Matching Training Rooms with Learning Requirements

For Learning That Requires	Suggested Training Rooms
High collaboration, low self-direction	Classroom with breakout rooms Lecture hall with breakout rooms
High collaboration, high self-direction	Breakout rooms Project room Conference room
Low collaboration, low self-direction	Classroom Computer classroom Lecture hall
Low collaboration, high self-direction	Distance learning room Media lab Computer lab

Sources: Based on "Workplace Issues: One in a Series. Learning Environments for the Information Age," available from the www.steelcase.com, accessed March 1, 2006; "Rethinking Higher Education Spaces," available at www.steelcase.com, accessed June 12, 2012.

Think about the physical requirements of the training room. Do trainees need to be able to concentrate and write? Do they need to be able to see detailed visuals? Choose a room that is large enough to meet your purpose, not just accommodate a certain number of trainees. Avoid putting 25 people in a room that can seat 250. A small number of trainees in a large room makes it impersonal and leaves people feeling insignificant. Consider the room design well in advance of the session, and work with the training site coordinator to design a setting that meets your learning needs.

Preparation of Materials

You need to know your content very well. Use mental and physical rehearsals to help build your confidence and to evaluate the pace and timing of material. Observe master trainers to get new ideas. Design the training from the audience's perspective—ask "So what?" about everything you plan to do. If you are using computers, videos, the Internet, distance learning, or other technologies, make sure you know how to work the equipment and have backup materials in case the technology fails. Make sure that your visuals are available in at least two formats (e.g., PowerPoint slides and pdf documents). Arrive at the training room at least 15 minutes early to make sure the room is set up correctly, materials are available, and technology is functioning. Greet the trainees as they enter the room.

Know the Audience: Age, Personality, Culture, and Language

Trainers need to conduct an analysis of their audience. One way to analyze the audience is to consider their persona.[15] A **persona** is a description of the audience you are designing the program for or delivering the training to. Personas summarize the typical characteristics of the trainees including preferences, background, values, career aspirations, traditional demographic information, and training content and delivery preferences. Personas can be developed for job families, a specific job, experience, background, or other attributes. Some of the ways you can develop personas include interviewing or surveying individuals who are likely to attend the program or other trainers who have instructed the same trainees. Developing a persona during program design helps to ensure training will meet trainees' needs and expectations.

Are Age and Generational Differences Important?

An important question to consider is whether trainees' needs and expectations vary based on generation or age differences. This is important to consider because it can help trainers understand how to create a learning environment and develop content that appeals to their audience and best facilitates learning and transfer. Popular press articles and survey results suggest that there may be generational preferences in how training programs are designed.[16] For example, Generation Z employees expect that training can be accessed when they need it via their smartphone or notebook or tablet computer. Baby boomers prefer classroom learning with lots of interaction. Millennials desire a sense of purpose in their work and want training content that aligns with the business issues they are facing. However, there is no research showing significant generational differences in training design or method preferences or that the effectiveness of learning and transfer of training for trainees of different generations varies according to the training method used.[17] But, there is research showing age has an influence on performance in training.[18] Learning new skills is often more difficult, takes longer, and results in lower skill levels for older workers compared to younger workers. However, self-paced training gives older trainees time to assume responsibility for their learning, to focus on what they are required to learn, and to understand the training and its importance. Also, training that occurs in small groups is advantageous for older trainees. The "bottom line" is that it is important to provide a learning environment that can benefit all learners.

Regardless of their age, all trainees need to understand how learning is relevant to their jobs and meets business needs. Training content such as examples, problems, addressed, scenarios, and cases need to be up to date. Providing badges, certificates, and microcredentials help motivate employees to attend training and provide them with ways they can earn recognition for their knowledge and skills from their peers and their current (and future) employer. Trainers should consider using face-to-face as well as technology-based learning methods such as e-learning modules and webcasts to help engage all learners (this is known as blended learning, which we will discuss in **Chapter Eight**). For example, Walden Security's sales training includes multiple different instructional methods including traditional classrooms, mentorships, just-in-time coaching, team workshops, role-playing, peer-to-peer development, and virtual instructor-led training.[19]

To help enhance the effectiveness of technology-based instruction for older employees, it needs to be highly structured, provide feedback and guidance, and have a user-friendly interface.[20] Making training fun using music, games, and humor can help keep learners interested, especially those who feel confident they can master the training content and believe the training content is not inherently stimulating.[21] To keep all learners' attention, information should be presented in shorter modules no longer than 20 minutes (recall the discussion of how to help trainees commit training content to memory in **Chapter Four**). This should be followed by activities and discussion to help learners store the information in memory and understand how it can be applied to their work and benefit them.

Personality

Some companies are using assessment tools to help instructors better understand the persona of learners who will be in their courses and programs. For example, The Learning and Development Group within PricewaterhouseCoopers (PwC) is using the Myers-Briggs Type Indicator (MBTI) as a tool for instructors to understand learner needs.[22] The MBTI focuses on how we gather information and how we make decisions. It is an assessment tool designed to help individuals understand their personality and how to use their personality preferences at work and in their lives. MBTI theory suggests that personalities differ on four dimensions. We gather information with an emphasis on either facts and details (Sensing or S) or abstract patterns and possibilities (iNtuition or N). We make decisions based on logical analysis (Thinking or T) or personal values (Feeling or F). Also, we differ in our orientation toward and how we deal with the environment. Individuals with an Extroversion (E) preference gain energy from interpersonal interactions, while those with an Introversion (I) preference draw energy from within themselves. Individuals with a preference for Judging (J) desire structure and closure, while those with a Perceiving (P) preference prefer to have many decision options. The MBTI assessment provides a four-letter personality type that is related to each of the four personality dimensions. The dimensions combine to form 16 personality types (e.g., an individual can be an ISTJ, an ENFP, or an INFP).

Instructors can have learners complete the assessment prior to attending training courses. Then, instructors can use this information about learners' personality types to help design training that the learners will find interesting, increasing their motivation to learn. For example, if an instructor has a course with trainees who are high on Sensing, this means they tend to receive and process information through a linear approach involving the five senses. As a result, the instructor would want to be sure to include training methods involving multiple senses. The use of logic and analysis appeals to Thinking learners, while Feeling learners need a personal reason for learning. For Thinking learners, instructors can emphasize the logic of an approach, while for Feeling learners, personal needs, beliefs, values, and experiences should be emphasized. The extent to which learners are extroverts or introverts can help an instructor decide whether to use a structured or flexible learning environment.

If you can't assess trainees' in advance, you can still ensure that at least some parts of training appeal to most learners. At American Fidelity Assurance Company, company trainers are encouraged to include multiple activities and create a learning environment that includes toys, music, vivid figures, charts, and graphs, and exercises that require working in pairs to stimulate interaction.

Culture and Language

Although many global companies require all employees to have proficiency in English, that does not guarantee that training content does not need to be translated into other languages.[23] You need to know what is required and necessary. For example, some countries such as Canada may require translation. For example, training for employees in Quebec, Canada, must provide French-Canadian language. Knowing what is required in your global company is key. Also, many languages have different dialects, depending on country location (e.g., French spoken in France differs from French spoken in Canada and in African nations). It is necessary to consider both the language and dialect in making translations. One way to cut down translations and costs may include researching the number of employees in each country and translating content into the languages that would work for most people.

If your trainees in a U.S. training program include individuals from other countries for whom English is a second language or if you are an instructor for a training course or program in another country, you will need to customize your content and instruction. There are several ways to do so. First, training content should include language, familiar names, and examples to which the audience can relate. For example, be careful with the use of slang, idioms, and sports analogies.[24] While "on the hook," "break the ice," and "burning bridges" make sense to English speakers who are familiar with American culture, these analogies can be confusing and distracting for trainees from other cultures. In case studies, change American names to names that are common in the country's culture. Second, determine the trainees' level of fluency in English. This should be done during the needs assessment by talking to local company staff and other instructors who have taught in the country. Also, you will need to pay attention to the trainees' English fluency when you meet them to determine if your presentation and slides will need to be adjusted. Try to use the local language if possible. Third, consider not only language but cultural norms that might affect activities and interactions between trainees due to power and status differences as well as interpersonal styles. For example, in some countries, providing feedback in public or challenging others (as might occur in a case analysis) could be seen as violating cultural norms. Likewise, having employees work in teams with managers during a training exercise might meet resistance, cause trainees to be uncomfortable, and result in losing credibility with the audience. Something as seemingly harmless as background colors or symbols on PowerPoint slides may be harmless in one country. But it may signify a particular political party in another country, which could cause you to lose the attention of trainees or even offend them. To avoid these types of problems from occurring, it is important to have individuals from the country you are training in review your content before you use it.

For example, consider how Western Union designs training to ensure its effectiveness across the countries in which the company operates. Western Union trains approximately 10,000 employees in more than 50 countries.[25] There are cultural, financial, and regulation differences across countries. Western Union trainers develop one global course and supplemental country-based modules to address these differences. Western Union uses employees in each country to help ensure translations are accurate and understandable and the program activities do not violate cultural norms.

Creating Inclusive and Accessible Training

Training should be accessible to all employees and designed in a way that maximizes all trainees' opportunities to learn. This means adapting training to individuals who may be physically challenged as well as neurodiverse.[26] **Neurodiversity** refers to natural and valuable variations in brain function and behavior, which affect how individuals process information and interact with others. Neurodiverse employees include those with autism spectrum disorder, Asperger's syndrome, attention deficit and hyperactivity disorder, dyslexia, and other cognitive differences. Neurodiverse employees have many strengths. For example, EY's Neurodiversity Center for Excellence has found that neurodiverse individuals are often technologically inclined and detail oriented with valuable skills in analytics, mathematics, pattern recognition, and information processing.[27] In a training program designed to give technical professionals the skills to handle data collection and analytics, document tracking and control, and other detailed tasks, EY found that neurodiverse employees learned how to automate processes far faster than the neurotypical employees they trained with. The neurodiverse workers created training videos to help all trainees learn automation more quickly. **Table 5.3** shows some of the ways to make training accessible.

Regardless of whether training is face-to-face, instructor-led, or online, it is important to review it to ensure it is truly accessible. Also, it is important to note that many design strategies can accommodate more than one type of access need. For example, trainees who are deaf or hard of hearing and those who have some types of learning disabilities can benefit from auditory accommodations. Also, trainees who are blind or have limited vision, or have learning disabilities (such as dyslexia) can benefit from audio descriptions or tools that translate auditory text to voice. It is important to recognize that these accommodations can also benefit trainees who have preference for reading over listening, people whose native language differs from what is spoken in a video, or helping trainees follow difficult-to-understand speakers or multiple speakers during a video, webinar, or face-to-face instruction.

TABLE 5.3 What to Provide to Ensure Training Is Accessible

Clear and descriptive verbal instructions	Closed-captioning of any videos shown in the webinar
Complete step-by-step written instructions	Audio descriptions of any videos shown in the webinar
Participation options for activities that require physical movement or mobility	Options for interaction via chat box or on-screen interface, that is, verbal participation instead of physical use of a mouse or keyboard
Extra time for reading, worksheets, or exams	Auditory directions that are the same directions as provided visually
Electronic copies of all printed materials	Content accessible via keystroke (mouse-enabled content, such as drag and drop, does not work well for visual access)
Large print or materials in braille	Custom alternate text for photos and graphics that are contextually relevant to the content
Live closed-captioning and transcriptions of instructors, videos, and course materials	Visual directions that are the same directions as provided verbally
Detailed verbal descriptions of any graphics presented	Keystroke and mouse-enabled content to allow for multiple access channels

Sources: Based on M. Orey, "All Inclusive Learning," *T+D,* August 2019, pp. 65–68; R. Ellis, "A Workforce That Spans the Spectrum," *T+D,* April 2020, pp. 25–27; E. Edelberg, "Create Accessible and Compliant Training Videos," *T+D,* July 2020, pp. 70–71.

Pretraining: Enhance Motivation to Learn through Communications, Prework, and Manager Involvement

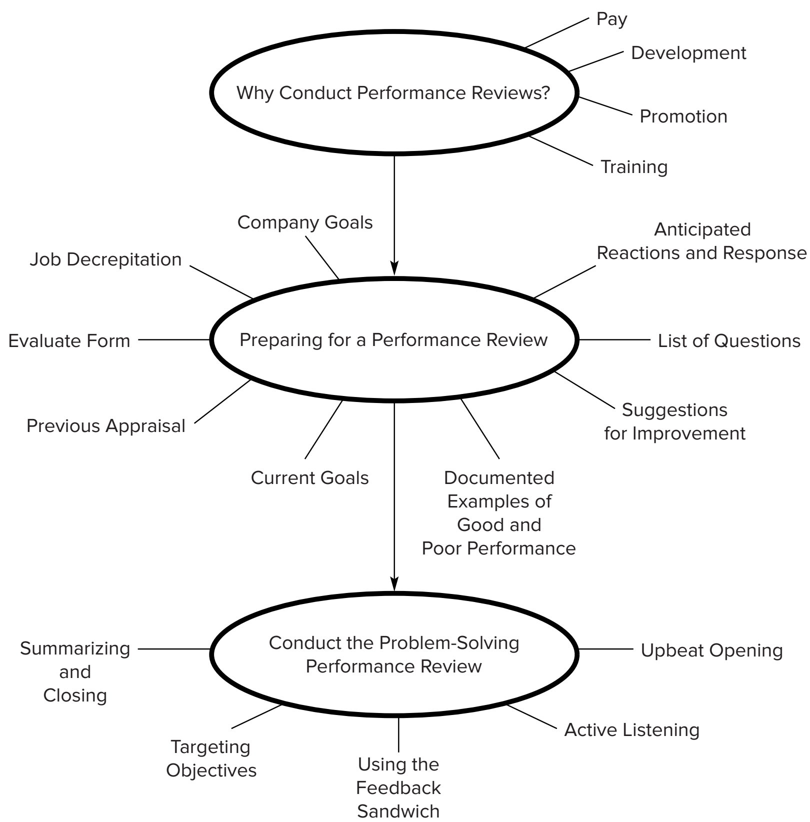
The important role of motivation in learning was discussed in **Chapter Four**. To enhance trainee motivation to learn, it is important to communicate to trainees before they attend training the purpose of the course, learning objectives, course prerequisites, and who else will be attending. It also is important to communicate how the course will be meaningful and useful. One way to do this is by sharing testimonials or examples of how other trainees have benefited from the course. Trainers can also increase the meaningfulness of the course and motivation to learn by assigning prework or pretraining assignments such as readings or cases, or by asking trainees to e-mail or bring to class work-related problems or issues to be used as examples or discussed during class. These activities help trainees come to the course or program with a sense of purpose and focus. For example, Shapiro Negotiations Institute asks participants in its training courses to bring real deals they are working on so they can apply what they are learning in the course.[28] At Johnsonville Sausage, prior to attending a course on how the company's products are sold, employees are asked to go on a scavenger hunt during which they go to a grocery store, use the store's ads, and observe store promotions. This helps prepare employees to share ideas when they attend the course and highlights its importance.

Trainee motivation to learn and the use of training content on the job can also be enhanced by getting managers to communicate and reinforce the importance of training, provide trainees with the opportunity to attend, and discuss with them their expectations for using training content in their work (or for teaching others to use what they learned). Later in the chapter, we discuss in more detail how to get a manager's support for training.

Provide an Overview of the Course

When beginning a course or workshop, it is important to give learners an idea of the "big picture" (i.e., what will be covered), including the objectives, timeline, activities, assignments, and other relevant information.[29] The overall concept, usefulness of the course, the objective, and its relevance to the job should be presented first, followed by an explanation of how the course is structured to achieve its objectives. This is important to get learners into the appropriate mental state for learning and to help them understand the personal and work-related meaningfulness and relevance of course content (recall the discussion of meaningfulness in **Chapter Four**). Using a flowchart or course outline, you should present the general topics first, followed by more specific subtopics. A concept map can also be used for organizing and presenting knowledge or skills. A **concept map** includes concepts shown in boxes, with the relationships between the concepts indicated by connecting lines. At the start of each part, you can present the appropriate part of the concept map, outline, or flowchart. This helps the learner organize the content in memory. Also, you can return to the entire concept map, flowchart, or outline during the course to show how the content covered fits into the course and its relationship to the next topic. **Figure 5.3** shows a concept map for a course on conducting an effective performance review. The concept map shows that the course includes three main topics and outlines the knowledge and skills that will be emphasized. For example, one of the course concepts is helping trainees understand why performance reviews are conducted. Pay, development, promotion, and training are emphasized as the four reasons for conducting performance reviews.

FIGURE 5.3 **A Concept Map for a Course on Conducting an Effective Performance Review**



Help Trainees Retain and Recall Training Content

To help trainees retain and recall training content (what we want them to learn), consider what we know about how our brains process and retain information (see **Chapter Four**). Carefully consider if you can chunk learning topics into short sessions of no longer than 20 minutes in length.[30] After 20 minutes, you need to either take a break or use different learning techniques (such as exercises, a question-and-answer session, or work in breakout rooms on a case or problem). This helps refresh and maintain the learners' attention and help them commit learning content to memory.

Mnemonics and metaphors can be useful for recalling important ideas. They help relate concepts, behaviors, and knowledge to be learned to concepts that the learner already knows. This makes it easier to retrieve the information from memory. *Mnemonics* are acronyms in which the first letter of the word represents a term or step in the process. For example, in a course emphasizing a method for presenting new ideas in meetings, the acronym PIN is used to help learners remember to identify the positive aspects of the idea (P), present interesting or important implications of the idea (I), and only after they have considered the value of the idea do they say "no" to it (N).[31] The instructor may give each learner a small safety pin as a souvenir and symbol to help them recall how to present ideas in meetings, or demonstrate idea killing by popping balloons with a pin and then introduce the metaphor of the safety pin as a way to remember how easy it is to suppress and squelch new ideas.

Novelty, or something unfamiliar or unusual, can also help trainees commit learning to memory. Novelty can be introduced in training through the use of pictures, stories, surprise speakers, or fun or unique training activities or presentations (e.g., teaching teamwork through having trainees make music through drumming). It is important that you don't overdo the amount of fun and novel activities in a training course because you risk trainees focusing too much attention on the activity itself rather than the training content.[32] To help avoid this you should make trainees aware of how the novel activity illustrates important concepts, skills, or behaviors that are the focus of training.

One way to help trainees recall what they have learned is to have them consider how they can use what they are learning in training. Application assignments increase the likelihood that trainees will recall the training content and apply it to their work setting when they encounter the appropriate cues (problems and work situations) in the environment. **Application assignments** refer to assignments in which trainees are asked to identify work problems or situations and to apply training content to solve them. The use of application assignments in training helps trainees understand the link between the learned capabilities and real-world application, which makes it easier to recall the capability when needed.

Sandy Spring Bank, a community bank headquartered in Maryland, uses application assignments in its management skills training classes.[33] The application assignments include topics such as building effective teams, change leadership, and delegation. To complete the assignments, trainees have to research the selected topic, prepare a summary, and apply what they have learned to the teams they supervise. This is then shared with their manager, who meets with them to discuss what they have learned and applied.

Another way to help trainees recall what they have learned is to have them consider and commit to using what they learned in training.[34] One way to do so is to use a future letter. A **future letter** is a letter trainees are asked to write to themselves that explains how they will use the training content (knowledge or skills) on the job. The letter should include their name and e-mail address. Trainers can e-mail the letters back to the trainees several weeks after training and ask them to respond back with what they actually did.

Finally, to help trainees retain and recall training content you might want to create a new course using the principles of microlearning (recall the discussion of microlearning in **Chapter Four**). Designing a course based on the principles of microlearning involves more than just taking a current training course and dividing it into chunks that need to be completed in a sequence. The best way to design microlearning is to first identify the terminal objectives (or what you want trainees to be able to do after completing the course or module) and break it down into the specific skills or "chunks" that trainees need (known as the enabling objectives).[35] Microlearning should focus on each of these specific skills. For example, for salespersons to effectively use selling skills they need to research the client, ask questions, listen, teach the client about the product or service offered, present the opportunity, and close the sale. Microlearning should be developed for each of the skills (research the client, ask questions, etc.) that enable the salesperson to effectively make a sale with a customer.

The characteristics of effective microlearning are shown in **Table 5.4**. Examples of these characteristics are found in the microlearning developed by University Health Systems (UHS). UHS, a public health system in Texas, recognized that it needed to make its training more accessible and less demanding for senior leaders.[36] Senior leaders often are unable to attend training because of a lack of time and pressure to deal with many high priority tasks at once. UHS created a mobile learning platform called Know on the Go, which provides bite-size lessons on leadership development for executives who find it difficult to attend in-person classes. Using Know on the Go, leaders receive links to 3- to 4-minute microlearning videos, which they can view at their convenience. After each video, users receive several messages. One asks them to complete a short survey evaluating their current level of expertise on the video's topic. They also receive a list of additional resources to learn more about the topic. The next message reinforces the video's content. The last message includes a short survey designed to evaluate their retention of the subject matter.

TABLE 5.4 Characteristics of Effective Microlearning

• Engages trainees by including activities such as games and reflection that get the trainee involved
• Uses videos, checklists, diagrams, or visuals to provide trainees with new and meaningful content
• Provides practice for trainees by using scenarios or other activities
• Allows on-the-job access to content for trainees' reference
• Allows trainees to choose when and what to learn
• Uses quizzes to measure what trainees have learned
• Use videos focused on a single concept that include questions to answer.

Sources: Based on S. Salomonsen, "Employ a Microlearning Content Strategy in Three Steps," *T+D,* June 2020, pp. 16–17; G. Hanshaw, "Faster, Better Cheaper," *T+D,* July 2019, pp. 18–19; M. Cole, *Microlearning: Delivering Bite-Sized Knowledge* (Alexandria, VA: Association for Talent Development, 2017); C. Torgerson, "Bit by Bit," *T+D,* November 2016, pp. 26–29; A. Paul, "Microlearning 101," *HR Magazine,* May 2016, pp. 37–40; Grovo, "Training the Trainer: How to Create Microlearning," from www.grovo.com/resources/white-papers, accessed February 1, 2018.

Classroom Management

Effective course design includes managing the training environment. Monitor the room for extra chairs, overflowing trash cans, and piles of materials left over from previous training sessions. A messy, disorganized, uninviting training room creates learning distractions. Give trainees frequent breaks so they can leave the room and return ready to start learning again.

Interacting with Trainees

As a trainer, you carry the responsibility for the trainees' learning experience. Consider beginning a training session with an icebreaker.[37] An **icebreaker** is an activity designed to welcome trainees and encourage conversation among them. You need to think about whether you need to introduce participants to each other, or if they already know each other you may want to focus instead on introducing the topic. Icebreakers should be relevant, fun, and quick. Also, you need to communicate the topics that will be covered, the learning approach that will be used, and the expectations for trainees. Be dramatic to draw attention to important points. Consider starting the training session with statistics and metrics to build your credibility with the audience. Use stories and anecdotes about your background and experiences. This helps engage the audience by personally relating to you. Communicate how the key concepts and ideas you are emphasizing will directly benefit the trainees.[38] Research suggests that trainees have the best recall of training content when the trainer is enthusiastic and avoids vocal distractions (e.g., use of "er" and "um").[39] Also, you should use a relaxed style and make learners comfortable.[40] As a trainer, you should recognize that your expectations for trainees' learning and your stereotypes can result in learners confirming those expectations (i.e., a self-fulfilling prophecy).[41] Negative expectations held by instructors can lead to learners' negative evaluation of the training and the trainer.[42]

How you should engage trainees is based on both the size of the room and the number of trainees. The larger the room, the more your gestures and movements must be exaggerated to get the audience's attention. To create intimacy with the training group, you must move close to them. Standing in the front of the room is a way to establish authority. One of the best ways to gain trainees' attention is to facilitate discussion from different places in the room. Strive to lead the instruction, but focus on the trainees. Help trainees develop their own answers, apply tools and techniques, and use reference materials to reach solutions that are effective in training and on the job. Use questions that lead trainees to answers or points that you want to make. Strive continually for interaction with trainees—trainees may have more real-life experiences with, exposure to, or applications related to training topics than you do. Create a training environment where trainees can learn from each other. Listen to trainees, summarize learning points, and provide feedback.

Consider how Total Quality Logistics and Guckenheimer encourage interaction.[43] Total Quality Logistics believes that the best learning occurs using face-to-face instruction in which the trainer interacts with the trainees. As a result, all of the company's new-hire and sales training is led by an instructor. The highly interactive sessions include role plays and class presentations to trainees. Even though Guckenheimer's process improvement training is done virtually, it still includes a lot of interaction. The training sessions use polling and quiz questions, webcams, and virtual breakout rooms. **Table 5.5** provides examples of how to get trainees involved in a training session.

TABLE 5.5 Examples of How to Get Trainees Involved

- Prepare and distribute content-related, open-ended questions to be discussed in breakout groups.
- Use creative activities or games that relate to the training content.
- Use assessments or measures that allow the trainees to learn about themselves and each other.
- Incorporate role playing.
- Conclude the training session by asking trainees, either individually or in teams from the same company or work group, to consider the following questions: "As a result of this session, what do you plan to start, stop, or continue doing? On what topic would you like to have more information?"
- Use polling and quiz questions.
- Ask questions related to the learning objectives.
- Use case studies that feature industry-specific or universal organizational issues or problems. Ask trainees to work individually or in teams to answer questions about the case and share their solutions with the larger training group.

Sources: Based on R. Marquez, "Contextual Circumstances," *T+D,* January 2019, pp. 20–22; D. Dupuis, "Shhhh! Listen," *T+D,* February 2019, pp. 65–68; M. Torrance, "Nine Moments of Learning," *T+D,* September 2014, pp. 76–77; J. Curtis, "Engage Me, Please!" *T+D,* November 2008, pp. 68–73.

Leading a Discussion

As we mentioned in **Chapter Four**, learner–learner and learner–instructor interactions are useful. They help learners understand the meaningfulness of training content and help commit it to memory. Effective discussions are based on clearly defined goals, topic focus and time frame, planned questions, and clear rules for participation.[44] Discussions can have a number of goals, including brainstorming sessions to identify solutions to problems or issues (before or after training); debriefing or reflection on learning activities (end of a learning event); application of knowledge and skills resulting in a learner action plan (during or at the end of a learning event); and evaluation of the learning experience by focusing on impressions and key lessons about the learning event (at the end of training). After you choose the goals, it is important to consider what topics will be discussed, time expectations, the type of seating best suited for the discussion, and materials needed, such as pictures, PowerPoint slides, or handouts. **Table 5.6** provides some tips for using questions effectively during a discussion. You also need to consider how you will invite learners to participate in the discussion (e.g., raise hands or just jump into the discussion). Also, you need to decide the rules for interrupting others, cell phone use, respecting others' opinions, and when leaving to take a break is appropriate. Finally, you need to consider your role. Are you an observer, a facilitator, or the leader of the discussion? The goals, topics, time frame and expectations, and structure for the discussion should be communicated to the learners before the discussion begins.

TABLE 5.6 Tips for Using Questions During a Discussion

Ask trainees if you sufficiently answered their question, and if not, ask them to clarify the question and try to answer it again.
If you do not know the answer to a question, do not make up an answer. Rather, tell them you will try to find an answer and get back to them later, or ask the other trainees for their thoughts on the question.
Repeat your question if the trainees did not hear or understand it.
Ask questions that require more than a yes or no response.
Pay attention to trainees' body language, which can show confusion or understanding and follow-up with a question.
If a question relates only to one or a few trainees problems, issues, or circumstances, ask if you can answer the question during a break or after the session.

Sources: Based on S. Oberstein, "Any Questions?" *TD* (December 2020): 34–39; D. Dupuis, "Shhhh! Listen," *TD* (February 2019): 65–68.

Dealing with Disruptive Trainees

How can you deal with employees who don't want to be trained despite being informed in advance of the course and how it relates to the business?[45] First, take charge of the session immediately, communicate your credentials, and in a friendly but assertive way tell employees why the training is important and how it will help them. Then let them vent their frustrations. Useful methods for this activity are to have trainees describe what they would be doing if they were not in the program, have trainees draw pictures of how the person next to them feels about attending the training, or have trainees break into groups and then ask some groups to make a list of the top 10 reasons not to be in the class and the other groups to list 10 reasons to be in the class. Reassemble the class and discuss first the reasons not to be in the class, and then end with the reasons to be in the class. For trainees who disrupt, sleep through, or constantly interrupt the training sessions, consider using activities that get them moving, engaged, and energized. Ask disruptive trainees to leave the session only as a last resort when all other options have failed.

Managing Group Dynamics

To ensure an even distribution of knowledge or expertise in groups, ask trainees to indicate whether they consider themselves as novice, experienced, or expert in terms of knowledge about a topic. Arrange the groups so that they contain a mix of novice, experienced, and expert trainees. Group dynamics can be altered by changing learners' positions in the room. Pay attention to group dynamics by wandering through the room and noticing which groups are frustrated or stalled, who is withdrawn, and who is dominating the group. Your role is to make sure that everyone in a group has an opportunity to contribute. Seating arrangements such as rectangular tables often give trainees authority based on where they are seated. For example, the end of a rectangular table is the position of authority. Putting a quiet person in the "power seat" creates an opportunity for that person to assume a leadership role within the group.

Curriculum, Course, and Lesson Design

Keep in mind that although the responsibility for designing the training program may belong to the instructional designer, human resource professional, or manager, the "clients" of the program should also be involved in program design. As already discussed in **Chapter Three**, managers, employees, and subject-matter experts (SMEs) should be involved in the needs assessment process. In addition, their role may include reviewing prototypes of the program, providing examples and program content, and participating in the program as instructors.[46]

For example, consider how Verizon developed a training program for new employees who maintain telecommunications equipment and replace telephone poles.[47] To ensure that the program was correctly designed, every piece of equipment (such as chainsaws, clamps, and pole pullers) that employees have to work with on the job was collected so course developers could see and touch the equipment. Developers worked together on the program design for five days along with subject-matter experts, including safety experts, video production and graphic designers, managers, and current employees. Having the developers and subject-matter experts work together helped create training content that is based on how the actual work is completed, in a safe and effective way.

A **curriculum** refers to an organized program of study designed to meet a complex learning objective, such as preparing a learner to become a salesperson, certified computer network technician, licensed nurse, or manager.[48] A curriculum typically includes several courses, and it usually focuses on developing a set of competencies needed to perform a job. Because these competencies are often expected to be developed over time, curricula and the courses within the curricula are completed over an extended time period.

In comparison to a curriculum, a **course** or **program** usually covers more specific learning objectives and addresses a more limited number of competencies or skills. For example, courses can address topics such as negotiations, talent management, customer service, and (as you are learning) even training and development. A course typically includes lessons or sessions that are smaller sections or modules covering different topics. The time frame for courses can range from one to several hours, a half-day, a full day, or even weeks.

It is helpful when creating a curriculum, course or program, or lesson to begin designing by considering the objectives.[49] **Terminal learning objectives** refer to the trainees' expected level of performance, skills, competencies, or knowledge that they can apply on the job. **Enabling learning objectives** identify parts of the terminal learning objective that trainees must learn during training. Enabling learning objectives identify specific measurable outcomes that trainees have to master in order to meet the terminal learning objective. The enabling objectives can be used to track the progress of the trainee towards meeting the terminal learning objective. For example, terminal learning objectives might focus on training a salesperson to sell a product or a technician to change a flat tire. Enabling learning objectives would describe what the salesperson or technician needs to understand or do in order to achieve the terminal objective. For example, for the salesperson, enabling objectives could include describing the product features and benefits, differences between a competitor's similar product, and closing the sale. For the technician, enabling objectives could include being able to identify the correct place for the jack under the car and using the jack to lift the car. Beginning design by first identifying terminal and enabling objectives helps trainers know what trainees need to achieve; how it can be measured; and how to design the course, identify appropriate content, and the most appropriate training method to use. Keep in mind that objectives should include a statement of what the trainee is expected to do (performance or outcome), quality or level of performance or outcome that is required, and a statement of the conditions (tools, equipment, environment, etc.) under which the trainee is expected to perform.

Although curricula, courses, and lessons all use learning objectives, they tend to vary in specificity. Learning objectives for curricula tend to be broader and less measurable than objectives for courses or lessons.[50] For example, for a project management course within a curriculum, an objective might be "Describe the four stages of the project life cycle using text and graphs." However, one of the objectives for a project management curriculum might include "Apply decision-aiding models when selecting a project." This objective is much broader than the course objective because it describes the general knowledge, skills, and abilities developed throughout the curriculum and is likely emphasized in several courses.

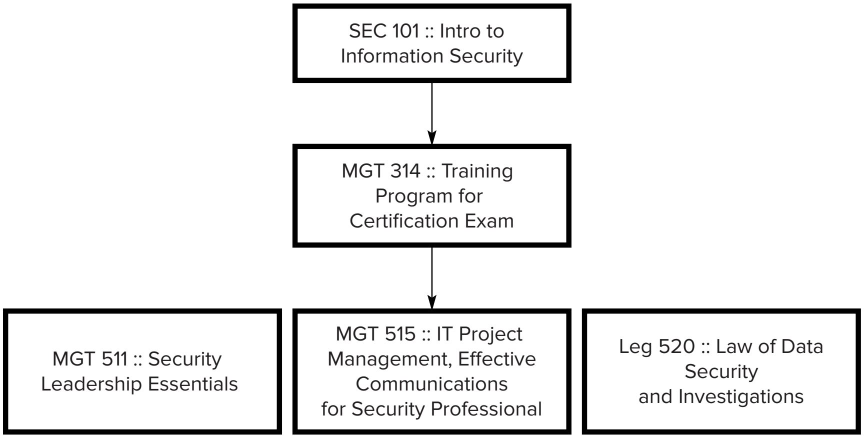
Program design should be considered a special case of project management. In this case, **project management** refers to the skills needed to manage a team of people and resources to create a learning solution.[51] SPADES (start, plan, administer, develop, engage, and stop) includes project management concepts that incorporate principles of Instructional System Design (recall our discussion of ISD in **Chapter One**). "Start" involves understanding the stakeholders for the learning solution (employees, managers, and subject-matter experts). It also involves conducting a needs analysis or revisiting the results to understand who needs training, the context, the focus, and the expected outcomes. The "Plan" phase involves identifying what you need to do as well as any resources that may be needed. This includes identifying tasks, how long it will take to complete them, and any expertise that is needed to execute your plan, such as web designers or subject-matter experts. "Administer" involves overseeing the tasks and communicating with the project team, stakeholders, and subject-matter experts. It also involves ensuring that tasks are completed and deadlines and budgets are met. "Develop" involves many of the steps in the ISD process, including identifying the training objectives and methods and how the program will be evaluated and ensuring transfer of training. It also involves designing the actual training, including any materials or online modules. "Engage" is where the training "goes live" or is implemented. It also includes conducting an evaluation of training (evaluation is discussed in **Chapter Six**). The "Stop" phase includes finishing the project, paying vendors and suppliers, and meeting with stakeholders to see if they feel that the project has met its objectives and their expectations.

Curriculum Road Map

A **curriculum road map** refers to a figure showing all of the courses in a curriculum, the paths that learners can take through it, and the sequences in which courses have to be completed (e.g., identify prerequisite courses). **Figure 5.4** shows an example of a curriculum road map for a security management training program. For each course, information that can be used to help develop and design detailed courses is provided. This includes[52]:

1. A brief statement of the course purpose, including why the course is important.
2. Prerequisite skills needed for the course.
3. Learning objectives or competencies covered by the course and a supporting or enabling objective (i.e., an objective that has to be reached in order for the learning objective to be accomplished).
4. The format of the content and course expectations. Expectations might relate to the type of content to be covered, how the content will be presented, and the structure of the content.
5. Delivery method for the content (e.g., online, classroom, and blended learning).

FIGURE 5.4 An Example of a Curriculum Road Map for a Security Management Training Curriculum



Source: Based on SANS Training Roadmap, from www.sans.org/media/security-training/roadmap.pdf.

Design Document

A design document can be used to guide the development of training and to explain the training to managers, SMEs, reviewers, or other trainers. **Table 5.7** shows a design document template.[53] Information for the design document is based on the information obtained from the needs assessment discussed in **Chapter Three**.

TABLE 5.7 Design Document Template

Scope of Project
- Goal
- Audience
- Design time and checkpoints
- Length of the course

Delivery
- Content
- Method
- Training time
- Problems and opportunities

Objectives
- Resources
- Who is involved
- Topical outline
- Administration and evaluation
- Links to other programs

Source: Based on G. Piskurich, *Rapid Instructional Design* (San Francisco: Pfeiffer, 2006).

The level of detail in the design document can vary. *Scope of project* includes the goals, outcomes, or achievement expectations for trainees; a description of the trainees; a description of how long it will take to develop the course and the checkpoints or tasks that need to be completed as the course is developed; and the length of the course. The length of a course is determined by considering trainees' abilities and their availability for training, the resources needed for training, whether the course is part of a larger curriculum or is a stand-alone course, and the need to develop modules in order to provide an opportunity for trainees to practice concepts and skills to avoid being overwhelmed.

Delivery includes what the course will cover, how it will be delivered (e.g., face-to-face or online), an estimate of the training time, and the identification of any special conditions or issues that may affect the course (e.g., problems getting equipment for video role plays and providing feedback).

Objectives refers to the course or program objectives. Those are broader summary statements of the purpose of the program. *Resources* refer to the materials—cases, videos, models, process maps, podcasts, lesson plans, or guides for use by the facilitator or participants—that need to be purchased or developed for the course. *Who is involved* includes trainers, program designers, and individuals who will be involved in the design, delivery, and evaluation of the program. The *topical outline* includes a brief outline of the topics that will be covered in the program. *Administration and evaluation* refers to who will be in charge of course scheduling, how trainees will enroll, how the course will be evaluated, and who will review and update the course. *Links to other programs* refers to any other needs, such as a train-the-trainer program or manager introduction or kickoff for the program. **Table 5.8** shows a simple design document for a performance appraisal review course designed to increase managers' effectiveness in conducting performance appraisal reviews. Performance appraisal review sessions are meetings between a manager and employee, during which the strengths and weaknesses of the employee's performance are discussed and improvement goals agreed upon.

TABLE 5.8 Design Document

Purpose: To prepare managers to conduct effective performance review sessions with their direct reports
Goals: Managers will be able to conduct a performance review session using the problem-solving approach
Target audience: Managers
Training time: 1 day
Method: Lecture, video, role plays
Number of participants per session: 20–25
Locations: Various
Prerequisites: None
Problems and opportunities: New performance appraisal system introduced; manager dislikes conducting feedback sessions
Instructor: Caroline O'Connell and facilitators

Course or Lesson Plan

Lesson or session plans are typically more detailed than the design document. They include the specific steps involved in the lesson, instructor and trainee activities, and the time allocated to each topic included in the lesson. Lesson plans can be designed for programs lasting a day, a week, or several hours. If training takes place over several days, a separate lesson plan is prepared for each day.

The **detailed lesson plan** translates the content and sequence of training activities into a guide that is used by the trainer to help deliver the training. That is, lesson plans include the sequence of activities that will be conducted in the training session and identify the administrative details. **Table 5.9** shows a sample detailed lesson plan. The lesson plan provides a table of contents for the training activity, which helps ensure that training activities will be consistent regardless of the trainer. Lesson plans also help ensure that both the trainee and the trainer are aware of the course and program objectives. Most training departments have written lesson plans that are stored in notebooks or in an electronic database. Because lesson plans are documented, they can be shared with customers of the training department (i.e., managers who pay for training services) to provide them with detailed information regarding program activities and objectives.

TABLE 5.9 **Sample of a Detailed Lesson Plan**

Course title: Conducting an Effective Performance Review Session
Lesson title: Using the problem-solving style in the performance review
Lesson length: Full day
Learning objectives:

1. Explain the purpose of performance reviews.
2. Describe steps in preparing for a performance review.
3. Describe the eight key behaviors used in the problem-solving style of giving appraisal feedback without error.
4. Demonstrate the eight key behaviors in an appraisal feedback role play without error.

Target audience: Managers
Prerequisites:
Trainee: None
Instructor: Familiarity with the tell-and-sell, tell-and-listen, and problem-solving approaches used in performance appraisal feedback interviews

Room arrangement: Fan-type
Materials and equipment needed: Computer, overhead projector, pens, access to video available on YouTube titled "Performance Appraisal Interviews," role-play exercises
Evaluation and assignments: Role playing; read article titled, "Conducting Effective Appraisal Interviews"
Comment: Article needs to be distributed two weeks prior to session.

Lesson Outline	Instructor Activity	Trainee Activity	Time
Introduction and why conduct reviews	Presentation	Listening	8–8:50 A.M.
Discussion of how to prepare and steps in conducting the review	Questioning	Participation	8:50–10 A.M.
Break			10–10:20 A.M.
View videos of three styles	Discussion of strengths and weaknesses of each	Watching	10:20–11:20 A.M.
Lunch			11:30 A.M.–1 P.M.
Presentation and video of eight key behaviors of problem-solving style	Presentation	Listening	1–2 P.M.
Role plays	Watch exercise	Practice using key behaviors	2–3 P.M.
Wrap-up	Answer questions	Ask questions	3–3:15 P.M.

Table 5.10 shows the features of an effective lesson plan. The lesson plan includes the learning objectives, topics to be covered, target audience, time of session, lesson outline, the activity involved, any required preparation or prerequisites, how learning will be evaluated, and steps to ensure transfer of training.[54]

TABLE 5.10 **Features of an Effective Lesson Plan**

Feature	
Learning objectives or outcomes	What is the lesson designed to accomplish? What is the standard for successful learning?
Target audience	Who is attending the lesson? What are the characteristics of the audience?
Prerequisites (trainees and instructor)	What will trainees need to be able to do before they can benefit from the course? Who is qualified to be in the program? Who is qualified to be an instructor?
Time	How much time is devoted to each part of the lesson?
Lesson outline	What topics will be covered? In what sequence?
Activity	What will trainees' role be during each topic covered? What will the instructor's role be?
Support materials	What materials and/or equipment are needed for delivery of instruction or to facilitate instruction?
Physical environment	Is a certain size or arrangement of room necessary?
Preparation	Do the trainees have homework that needs to be completed before the lesson? What does the instructor need to do?
Lesson topic	What topic will the lesson cover?
Evaluation	How will learning be evaluated (e.g., tests, role plays)?
Transfer and retention	What will be done to ensure that training content is used on the job?

Sources: Based on R. Vaughn, *The Professional Trainer* (Euclid, OH: Williams Custom Publishing, 2000); R. F. Mager, *Making Instruction Work*, 2d ed. (Atlanta, GA: Center for Effective Performance, 1997); L. Nadler and Z. Nadler, *Designing Training Programs*, 2d ed. (Houston, TX: Gulf Publishing, 1992); Big Dog's Human Resource Development website, www.nwlink.com/donclark/hrd.html; A. Barron, "Design Workshops for Maximum Engagement," *T+D,* June 2015, pp. 68–69.

In developing the lesson outline, trainers need to consider the proper sequencing of topics. Trainers must answer questions such as, "What knowledge and skills need to be learned first?" "In what order should the knowledge, skills, and behavior be taught?" "What order will make sense to the trainees?" There are different options for sequencing.[55] For example, *job task* or *functioning sequencing* starts with an overview of the job and lists the steps of completing a task or job in the order in which they are completed. *Familiar to unfamiliar sequencing* starts with an idea or content that is familiar to the learner and builds to newer information. Make sure that you communicate the sequencing of the topics to the trainee; this makes it easier to follow the flow of the lesson, which helps organize it in memory and aids in retention of learning.

A storyboard is useful for course and lesson design and determining sequencing. A **storyboard** is a group of pictures that tell a story. You can storyboard using pencil-and-paper or markers on notebooks, erasable marker boards, or flip charts or PowerPoint slides. A storyboard is useful for showing the correct process or procedure as well as the order of activities or presentation of ideas in a training module, course, or program.[56]

It is also important to consider the target audience. Any information about their training and experience, their motivation for taking the course, and their interests, learning styles, and background (e.g., education and work experience) will be useful for choosing meaningful examples, determining program content, deciding on support materials, and building the credibility of the training. It is useful to consider what might cause trainees frustration, confusion, or tension in the lesson.[57] There are several ways to identify these issues. One way is through interviewing employees who have previously completed the lesson or trainers who have previously taught the lesson. Another way is to review post-training surveys of trainees who have previously completed the lesson. Identifying these issues can help you reduce or eliminate them by building in sufficient time, activities, and support during and after a lesson. Information about the target audience should be available from the person analysis of the needs assessment (see **Chapter Three**). Additional information can be collected by talking to the "clients" (e.g., managers) who requested the training program and to past program participants, if available. Support materials include any equipment needed for delivery of instruction, such as computers, projectors, or tablet computers. Trainers should arrange for the purchase of any whiteboards, flip charts, or markers that may be used in instruction. Any exercises needed for trainees' practice or preparation, such as readings, role-play exercises, assessments, or pretests, need to be ordered or reproduced (after copyright permission is obtained). In considering instructor and trainee activity, the focus should be on ensuring that the lesson has as many features of a positive learning process as possible, including communication of objectives, feedback, opportunities for practice, opportunities for trainees to share experiences and ask questions, and modeling or demonstration. Transfer and retention strategies might include chat rooms, follow-up meetings with the manager, and action planning. Transfer and retention strategies are discussed later in this chapter.

Referring back to **Table 5.9**, there are four learning objectives presented for the course, "Conducting an Effective Performance Review Session." The eight key behaviors referred to in the "Learning Objectives" section are as follows: (1) explain the purpose of the meeting; (2) ask the employee to describe what he or she has done to deserve recognition; (3) ask the employee to describe what to stop doing, start doing, or do differently; (4) ask the employee for areas in which you can provide assistance; (5) give the employee your opinion of his or her performance; (6) ask for and listen to the employee's concerns about your evaluation; (7) agree on steps/actions to be taken by each of you; and (8) agree to a follow-up date.[58]

The prerequisites include (1) arrangement of the training site, equipment, and materials needed; (2) instructor preparation; and (3) trainee prerequisites. In the example, the trainer needs a computer to show a video of performance appraisal feedback styles. The trainer also needs an overhead projector to record points made by the trainees during the planned discussion of the strengths and weaknesses of the appraisal styles presented in the video. The room needs to be fan-shaped, so trainees can see the trainer and each other. Also, the fan arrangement is good for role-play exercises that involve trainees working in groups of two or three.

Trainee prerequisites refer to any preparation, basic skills, or knowledge that the trainee needs prior to participating in the program. Recall our discussion of basic skills in **Chapter Three**. Trainee prerequisites may include basic math and reading skills, completion of prior training sessions, or successful completion of tests or certificate or degree programs. Instructor prerequisites indicate what the instructor needs to do to prepare for the session (e.g., rent equipment or review the previous day's training session) and any educational qualifications the instructor needs. Lesson plans also may cover how the lesson will be evaluated and any assignments that the trainees need to complete. In the example, trainees are required to read an article titled, "Conducting Effective Appraisal Interviews." The instructor needs to be familiar with the purpose for performance review, how to prepare for a performance review, and the behaviors for conducting problem-solving appraisal feedback interviews.

Consider how Morrison Healthcare and Bankers Life intentionally designed their training programs to enhance learning and transfer.[59] Morrison Healthcare's career development training series for its associates includes 10 modules covered in two sessions, with each session being five hours long. A two-week break between the two sessions gives associates time to try out what they have learned on the job and complete homework assignments. At Bankers Life, the sales agent program consists of several different modules that build on each other. The four steps in each module include online learning, debrief, role play, and on-the-job training.

An Example of Program Design

Consider the program that Saudi Aramco, an oil company headquartered in Dhahran, Saudi Arabia, developed to train geoscientists and petroleum engineers to encourage critical thinking and exploration of options.[60] To develop the program, Saudi Aramco relied on a development team, including an instructional designer, a technical writer, a graphics professional, a professional development adviser, and a subject-matter expert. The program included courses, modules within the courses, and activities within the modules. The program design included the following steps:

1. They worked with key job performers to determine what work processes and tasks were considered critical for effective performance and to identify if they could be improved through training.
2. Structured interviews were conducted and they observed jobs to collect data about job functions, tasks within those functions, key performance elements included in the tasks, important job outcomes, and the knowledge required to perform the tasks.
3. Work processes and tasks that needed training were identified. The team analyzed the tasks and identified ways to achieve important performance outcomes. This resulted in a framework to show how work gets done.
4. The tasks were analyzed to design the content and sequence the course activities. This involved identifying how to combine concepts and tasks into modules.
5. Program topics were identified as well as how they would be delivered, and the order in which they would be trained was identified. Also, program prerequisites and evaluation outcomes were discussed.
6. Module objectives, outcomes, sequence, instructional methods, and practice activities were developed. Learners were required to demonstrate the desired performance level before returning to their jobs.
7. Media, tools, and equipment needed for each activity included in the modules were chosen. These choices were based on the actions expected from learners.

Converting In-Person to Online Learning

The COVID-19 pandemic required all trainers to carefully reconsider what, when, and how to train employees and still facilitate learning. For most trainers, the option was to cancel or postpone training or to redesign it so it could be accessed online. Although the pandemic forced trainers to develop virtual online training programs, as discussed in **Chapter One**, many companies had already started moving to technology-based training delivery methods. To facilitate learning and transfer of training in online learning, it is especially important to consider several design elements.[61] To avoid boredom and keep trainees' attention, online training should incorporate multiple rather than one long training session, as well as different activities and instructional modes. For example, online programs should incorporate short videos, PowerPoint presentations, and web conferences. Also, personal interactions with trainers, facilitators, and other trainees are important. This can be accomplished using discussion boards, virtual breakout rooms, or projects. Trainers and facilitators should stay connected with trainees to review projects or assignments and answer questions. The personal interaction helps keep trainees focused on learning and application and enhances their motivation to learn. Engaging the trainee during and after training helps them retain knowledge and skills and practice and apply what they learned on the job. **Chapter Eight** will introduce how specific technology-based training methods such as serious games and virtual reality help facilitate learning and transfer of training.

For example, the pandemic forced the U.S. Department of Agriculture's Animal Plant and Health Inspection Service (APHIS) to redesign its Experienced Supervisor Applied Workshop sessions.[62] These sessions focused on performance management, engaging employees, and mentoring. Because these sessions were mandatory for all supervisors based on APHIS policy, the training design team worked to develop and deliver a virtual version of the program. The in-person version of the course occurred over four and one-half days. The design team chunked the content into six two-hour sessions over the course of a few weeks. Between sessions, trainees are asked to reflect and complete assignments. Role-playing sessions were updated to include issues and content faced when working in a virtual environment. Coaching simulations take place via videoconferencing, as often occurred even before the pandemic. The new program design allowed APHIS to continue training during the pandemic. But the investment in redesign will not be wasted after the pandemic is over. APHIS plans to use the virtual program to reach managers who have difficulty traveling to attend training. This will also help reduce travel expenses for these remote managers.

Program Design Implications for Transfer of Training

Recall the discussion of identical elements and near transfer and stimulus generalization and far transfer in **Chapter Four**. One of the important decisions that trainers have to make is to determine whether the learning environment and learning conditions should perfectly match the job environment, or if training should emphasize general principles that can be applied to many different work situations. Also, to facilitate transfer of training, instructors need to consider encouraging trainees to self-manage the use of learned skills, as well as find ways to ensure that managers and peers provide trainees with opportunities to use training content, support training, and provide electronic performance support.

Determine Focus: Near versus Far Transfer

The degree of flexibility and variability in the skills and knowledge that the learner needs for successful performance is important to consider in determining the extent to which the learning environment and learning conditions should match the job and working conditions.[63] For example, if the tasks emphasized in training involve responding to predictable situations with standardized responses, then training should be designed with an emphasis on identical elements and near transfer. This is often the case when the focus is on procedural knowledge, or when a series of steps must be followed in a specific way to complete a task successfully. Examples of procedures that company employees often must follow to that level of exactness include answering the phone, securing offices and buildings, handling client questions, logging onto computers, and using software. In these cases, instruction should emphasize near transfer. Near transfer refers to the need to apply learned capabilities exactly in a work situation. Programs that emphasize near transfer should include the following:[64]

- Trainees need to follow standardized procedures, processes, and checklists.
- Trainees should be given an explanation as to any differences between training and work tasks.
- Trainees should be encouraged to focus only on important differences between training tasks and work tasks (e.g., speed of completion) rather than unimportant differences (e.g., equipment with the same features but a different model).
- Trainees should be provided with an explanation of why—as well as how—the procedure should be performed to help them understand the concepts behind the procedure.
- Behaviors or skills that trainees learn in the program should contribute to effective performance.

For example, consider the importance of carefully following these principles in designing training for police officers. In police officer training, new hires (cadets) practice shooting targets. During practice sessions, cadets fire a round of shells, empty the cartridges into their hands, and dispose of the empty cartridges into the nearest garbage can. This process is repeated several times. After graduation from the police academy, one new officer was involved in a shooting. He fired his gun, emptied the cartridges into his hand, and proceeded to look for a garbage can for the empty cartridges. As a result, he was seen by the gunman, shot, and killed!

In contrast, if the tasks emphasized in training involve more variable interactions with people or equipment and unpredictable responses, then instruction should emphasize learning more general principles and knowing when and why to pursue a course of action. That is, instruction should emphasize far transfer. This is the case when teaching learners how to deal with novel situations involving original thinking to develop a solution, create a new product, or solve a difficult problem. Programs that emphasize far transfer should include the following:[65]

- General principles, broad concepts, or key behaviors that might apply to a greater set of contexts than those presented in the training session.
- A list of prompts or questions to help trigger thoughts and question sets, such as “How is this similar to problems I have encountered before?” and “Have I identified the real problem?” This helps trainees see connections among strategies that have been effective in different situations.

Encourage Self-Management

One way to prepare trainees to deal with the obstacles that they may face in work environments (such as a lack of opportunity to use skills or an unsupportive manager) is to provide instruction in self-management techniques at the end of the training program. **Table 5.12** shows an example of self-management instruction. The module begins with a discussion of lapses, emphasizing that lapses are not evidence of personal inadequacy; rather, they result from habits of usage of knowledge and skill that have developed over time. Lapses provide information necessary for improvement. They help identify the circumstances that will have the most negative influence on transfer of training. Next, a specific behavior, skill, or strategy is targeted for transfer. The skill should be measurable and countable. Then, obstacles that inhibit transfer of training are identified; these can include both work environment characteristics and personal characteristics (such as low self-efficacy). Trainees are then provided with an overview of coping skills or strategies that they can use to deal with these obstacles. These skills and strategies include time management, creating a personal support network (persons to talk with about how to transfer skills to the work setting), and self-monitoring to identify successes in transferring skills to the job. Next, to deal with lapses, trainees are instructed to be aware of where the situations are most likely to occur. The final part of the module deals with the use of resources to aid transfer of training. These resources may include making the trainer, peers, direct reports, or your boss aware of the skills you want to transfer and asking them to provide their feedback and suggestions.

For example, a manager may have attended a training program designed to increase her leadership skills. After a discussion of lapses, the manager identifies a target skill (say, participative decision making—that is, discussing problems and potential solutions with subordinates before making decisions that will affect the work group). The manager defines the skill and how to measure it: “Discussing problems and solutions with my subordinates at least two times each week.” Next, the manager identifies factors that may contribute to a lapse. One factor may be the manager’s lack of confidence in being able to deal with subordinates who disagree with her view. Potential coping strategies that the manager identifies may include (1) scheduling time on the calendar to meet with subordinates (time management), (2) communicating to the boss the transfer goal and asking for help (create a support group), and (3) taking an assertiveness training course. In what

TABLE 5.12 Content of a Sample Self-Management Module

1. **Discuss lapses.**
   - Note evidence of inadequacy
   - Provide direction for improvement
2. **Identify skills targeted for transfer.**
   - Specify the skills
   - Make them measurable and countable
3. **Identify personal or environment factors contributing to lapses.**
   - Low self-efficacy
   - Time pressure
   - Lack of manager or peer support
4. **Discuss coping skills and strategies.**
   - Time management
   - Setting priorities
   - Self-monitoring
   - Self-rewards
   - Creating a personal support network
5. **Identify when lapses are likely.**
   - Situations
   - Actions to deal with lapses
6. **Discuss resources to ensure transfer of skills.**
   - Manager
   - Trainer
   - Other trainees

Sources: Based on M. Colburn, "True Leadership and the Principles of Self-Management," *T+D,* May 2019, pp. 66–71; R. D. Marx, "Improving Management Development through Relapse Prevention Strategies," *Journal of Management Development* 5 (1986), pp. 27–40; M. L. Broad and J. W. Newstrom, *Transfer of Training* (Reading, MA: Addison-Wesley, 1992); R. D. Marx and L. A. Burke, "Transfer Is Personal." *In Improving Learning Transfer in Organizations*, eds. E. Holton and T. Baldwin (San Francisco: Jossey-Bass, 2003), pp. 227–42.

situation may the manager be especially likely to experience a lapse? The manager identifies that she may be most likely to lapse back into an autocratic style when faced with a short time frame for making a decision (time pressure being an obstacle). The manager recognizes that it may be inappropriate to try to gain consensus for a decision when time constraints are severe and subordinates lack expertise. In the last step of the module, the manager suggests that she will (1) meet with her mentor to review her progress, (2) talk with other managers about how they use participative decision making effectively, and (3) resolve to communicate with other managers who attended the training session with her. The manager also commits to monitoring her use of participative decision making, noting successes and failures in a diary.

Encourage Manager Support for Training

Manager support refers to the degree to which trainees' managers (1) emphasize the importance of attending training programs, (2) stress the application of training content to the job, and (3) provide opportunities for trainees to use what they have learned on the job. Managers can communicate expectations to trainees, as well as provide the encouragement and resources needed to apply training on the job. One company asked trainees and their bosses to prepare and send memos to each other. The memos described what the other person should "start to do," "continue to do," "do less," or "stop doing" to improve learning transfer.[66]

Managers can provide different levels of support for training activities, as illustrated in **Figure 5.5**.[67] The greater the level of support, the more likely that transfer of training will occur. Managers should be actively involved in the design and delivery of training programs. The basic level of support that a manager can provide is acceptance (allowing trainees to attend training). The greatest level of support is to participate in training as an instructor (teaching in the program). Managers who serve as instructors are more likely to provide many of the lower-level support functions, such as reinforcing use of newly learned capabilities, discussing progress with trainees, and providing opportunities to practice. To maximize transfer of training, trainees need to achieve the highest level of support possible.

Managers can also facilitate transfer through reinforcement (use of action plans). An **action plan** is a written document that includes the steps that the trainee and manager will take to ensure that training transfers to the job (see the sample action plan shown in **Figure 5.6**). The action plan includes (1) a goal identifying what training content will be used and how it will be used (project, problem); (2) strategies for reaching the goal (including what the trainee will do differently, resources needed, and type of support needed from managers and peers); (3) strategies for receiving feedback; and (4) expected results. The action plan also provides a progress check schedule, with specific dates and times when the manager and trainee agree to meet to discuss the progress being made in using learned capabilities on the job. The action planning process should start by identifying a goal and the strategies for reaching that goal. Once those are determined, strategies for obtaining feedback and identifying what the accomplishment of the goal will look like are completed. To complete their action plans, trainees may need additional technical support, such as access to experts who can answer questions or reference materials. Trainers or project managers can help trainees get the resources that they need to complete their action plans through either face-to-face or electronic meetings.

Consider how managers at MasTec Utility Services, Deloitte, and the Navy Federal Credit Union support training.[68] To reinforce safety training, MasTec Utility Services asks trainees to meet with their managers after training to review what they learned. Managers are also asked to conduct performance assessments to evaluate how well employees are applying what they learned. At Deloitte, 92 percent of training programs are led by employees. Every member of Deloitte's U.S. board and executive committee has either been a

FIGURE 5.5 **Levels of Management Support for Training**

Level		*Description*
Teaching in program	HIGH SUPPORT	Participate as trainer
Practice skills	↑	Allow trainees opportunity to practice
Reinforcement		Discuss progress with trainees; Ask how to support trainees' use of new capabilities
Participation		Attend session
Encouragement	↓	Accommodate attendance at training through rearranging work schedule; endorse employees' attending training
Acceptance	LOW SUPPORT	Permit employees to attend training; acknowledge importance of training

FIGURE 5.6 **A Sample Action Plan**

Training Topic ________________
Goal *Include training content (knowledge, skill, behavior, competency, etc.) and application (project, problem, etc.)*

____
____
____
____

Strategies for Reaching Goal
Modifying behavior (What will I do differently?)

____
____
____
____

Resources needed (Equipment, financial)

____
____
____
____

Support from peers and manager (Be as specific as possible.)

____
____
____
____

Strategies for Receiving Feedback about My Progress *(Include meetings with peers and managers, self-monitoring of progress, customer reactions, etc.)*

____
____
____
____

Expected Results

What will be different?

____
____
____

Who will notice?

____
____
____

What will they notice?

____
____
____

Progress Date Checks ____________ ____________ ____________

facilitator or director of a training program. At Navy Federal Credit Union, the senior vice president of mortgage lending worked alongside the learning and development team to create a series of training courses designed to improve the time management, organization, and communications skills of loan officers and processors.

Table 5.13 presents a checklist that can be used to determine the level of manager support before, during, and after training. The more statements that managers agree with, the greater their level of support for the training program. There are several ways to gain managers' support for training.[69] First, managers need to be briefed on the purpose of the program and its relationship to business objectives and the business strategy.

Managers should be given the schedule of topics and a checklist of what they should do after the training to ensure that transfer occurs. Second, trainees should be encouraged to bring to the training session work problems and situations they face on the job. These can be used as practice exercises or put into action plans. Trainees should jointly identify the problems and situations with their managers. Third, information regarding the benefits of the course collected from past participants should be shared with managers. Fourth, trainers can assign trainees to complete action plans with their managers. Fifth, if possible, managers should be used as trainers. That is, train the managers first, and then give them the responsibility of training their subordinates.

TABLE 5.13 **Checklist for Determining a Manager's Level of Support for Training**

Please read each statement and check all that apply to you:	
_______	I have discussed the course and set learning objectives for employees.
_______	I understand the purpose of training.
_______	I know how training matches what the employee needs to learn.
_______	I know enough about the training to support employees' use of what they learn when they return.
_______	The employee has completed action plans or other types of learning contracts designed to help apply learning on the job.
_______	I have communicated my expectations regarding training.
_______	I encourage employees to share what they have learned after the course or program.
_______	I encourage employees attending training to prevent distractions by using call-forwarding and out-of-office e-mail notices.
_______	I allow employees to attend training.
_______	After training, I will debrief employees on the learning objectives and discuss how to apply them.
_______	After training, I will meet with employees to hear their ideas of how to apply what they learned.
_______	I will provide opportunities for employees to share what they learned with other employees.
_______	I recognize and reward learning that is demonstrated on the job.

Sources: Based on R. Saunderson, "ROI for Recognition," *training,* November/December 2010, pp. 52–54; A. Rossett, "That Was a Great Class, but . . . , " *Training & Development,* July 1997, p. 21.

At PricewaterhouseCoopers (PwC), partners and senior-level leaders delivered more than 90 percent of the training hours to employees.[70] All senior partners and the company's U.S. chairman completed more than 66 hours of training in technical and interpersonal skills. Then, to demonstrate the importance that PwC places on learning and to develop employees as leaders, they led formal training sessions as well as provided informal coaching. The leadership development program at Gables Residential, a real estate company, focuses on developing self-awareness and skills in coaching and managing high-performance teams.[71] Each month following a training session a training and development manager meets with individual participants to discuss what they learned and provide coaching and support to encourage them to further develop their skills. Western Union's Guide.Performance.Succeed (GPS) program requires leaders to get involved in helping develop their employees' skills by setting clear expectations, providing regular real-time feedback, and holding their employees and themselves accountable for meeting talent development goals.[72]

At a minimum, meetings should be scheduled with managers to explain the purpose of the training and to set expectations that they will encourage attendance at the training session, provide practice opportunities, reinforce use of training, and follow up with trainees to determine the progress in using newly acquired capabilities.

Peer Support

Transfer of training can also be enhanced by a support network among the trainees.[73] A **support network** is a group of two or more trainees who agree to meet and discuss their progress in using learned capabilities on the job. This may involve face-to-face meetings, communications via e-mail, or interactions on an electronic social network similar to Facebook. Trainees may share successful experiences in using training content on the job. They also might discuss how they obtained resources needed to use training content or how they coped with a work environment that interfered with the use of training content.

Trainers also might use a newsletter or build a web site highlighting how trainees are dealing with transfer of training issues. Distributed to all trainees, the newsletter or web site might feature interviews with trainees who have been successful in using new skills. Trainers may also provide trainees with a mentor—a more experienced employee, or even a peer who previously attended the same training program. The mentor can provide advice and support related to transfer of training issues (e.g., how to find opportunities to use the learned capabilities).

At Signature Consultants, an information technology staffing company, every employee is considered a trainer because they share responsibility for learning.[74] Also, mentors trained by the training and development team help current employees understand career paths and development opportunities. This has resulted in almost completely using current employees to fill job openings rather than hiring experienced employees from outside the company.

Opportunity to Use Learned Capabilities

Opportunity to use learned capabilities (**opportunity to perform**) refers to the extent to which the trainee is provided with or actively seeks experiences that allow application of the newly learned knowledge, skill, and behaviors from the training program. Opportunity to perform is influenced by both the work environment and trainee motivation. One way that trainees have the opportunity to use learned capabilities is through assigned work experiences (e.g., problems or tasks) that require their use. The trainees' manager usually plays a key role in determining work assignments. Opportunity to perform is also influenced by the degree to which trainees take personal responsibility to actively seek out assignments that allow them to use newly acquired capabilities.

Opportunity to perform is determined by breadth, activity level, and task type.[75] *Breadth* includes the number of trained tasks performed on the job. *Activity level* is the number of times or the frequency with which trained tasks are performed on the job. *Task type* refers to the difficulty or critical nature of the trained tasks that are actually performed on the job. Trainees who are given opportunities to use training content on the job are more likely to maintain learned capabilities than trainees given few opportunities.[76]

Opportunity to perform can be measured by asking former trainees to indicate (1) whether they perform a task, (2) how many times they perform the task, and (3) the extent to which they perform difficult and challenging tasks. Individuals who report low levels of opportunity to perform may be prime candidates for "refresher courses" (courses designed to let trainees practice and review training content). Refresher courses are necessary because these persons have likely experienced a decay in learned capabilities because they have not had opportunities to perform. Low levels of opportunity to perform may also indicate that the work environment is interfering with the use of new skills. For example, the manager may not support training activities or give the employee the opportunity to perform tasks using skills emphasized in training. Finally, low levels of opportunity to perform may indicate that training content is not important for the employee's job.

Technological Support

An **electronic performance support system (EPSS)** is a computer application that can provide skills training, information access, and expert advice, as requested.[77] A performance support system may be used to enhance transfer of training by providing trainees with an electronic information source that they can refer to on an as-needed basis while they attempt to apply learned capabilities on the job. The use of performance support training is discussed in detail in **Chapter Eight**.

To help support leadership training designed to foster a more diverse and inclusive culture, North Highland, a management consulting company, developed three minute microlessons that prompted trainees to reflect and take action on what they learned.[78] The microlessons could be accessed using smartphones and other mobile devices. Reflections and actions were posted in an online site. Trainees posted almost 900 reflections and actions.

Content Curation: Keeping Training Content Up-to-Date, Organized, and Accessible

As discussed in **Chapter One**, employees learn through formal training, employee development, knowledge sharing, and informal learning. These include using videos, podcasts, manuals and other written material, face-to-face or technology-aided interactions with others (e.g., social media), instructor-led or online formal training courses and workshops, on-the-job training, and job experiences. Providing a variety of different learning methods and tools shows that the company values learning. It also provides employees with a choice in how they learn, the opportunity to set aside a dedicated period of time for learning, and access to learning on the job when they need it. However, to maximize the potential learning benefits that can come from providing multiple ways to learn, training content must be organized and easily accessible, up-to-date, and relevant (i.e., knowledge and skills employees want to learn). If you have ever visited any kind of museum, library, or gallery, you are familiar with curation. Museums and galleries employ curators whose job it is to decide what will be displayed to the public (rather than placed in storage) and when and how it will be displayed. In a training context, **content curation** refers to the process of identifying relevant training content and organizing it in a way that makes it easy for trainees to access it.[79] For example, at Mariner Finance, existing training content is reviewed four times per year to ensure it is relevant. Relevance is based on employee feedback after they complete training and discussions with managers. Trends in quizzes completed by trainees in online courses, such as questions that are consistently answered wrong, are used to update and change the emphasis of courses. At immixGroup, changes and updates of courses are made by a content specialist from the training department who reviews course content with the help of subject-matter experts.

How to Choose a Vendor or Consultant for Training Services

If a company decides to purchase a training program from a consultant or vendor rather than build the program in-house, it is important to choose a high-quality provider. Training providers may include individual consultants, consulting firms, companies that specialize in designing and selling training programs, or academic institutions. How can you identify a vendor for training services? Personal networks, professional associations, conferences, and trade shows are frequently used by persons in charge of company training (i.e., chief learning officers).

The most important qualities for vendors include providing a high-quality product with positive results, providing good value for the cost, and being easy to work with. It is important for the vendor to try to understand the business issues and deliver high-quality products and services to resolve them. Good vendors have to ask the right questions and listen to your answers, as well as customize and deliver learning as expected, on time, and within the budget. A common criticism of vendors is that they try to provide an existing learning solution rather than a customized product to fit the company's needs.

Many companies identify vendors and consultants who can provide training services by using requests for proposals.[80] A **request for proposal (RFP)** is a document that outlines for potential vendors and consultants the type of service the company is seeking, the type and number of references needed, the number of employees who need to be trained, funding for the project, the follow-up process used to determine level of satisfaction with the service, the expected date of completion of the project, and the date by which proposals must be received by the company. It also describes scoring criteria that will be used to evaluate the proposal. The RFP may be mailed to potential consultants and vendors or posted on the company's website. The RFP is valuable because it provides a standard set of criteria against which all consultants will be evaluated. The RFP also helps eliminate the need to evaluate outside vendors that cannot provide the needed services.

Usually, the RFP helps identify several vendors who meet the criteria. The next step is to choose the preferred provider. **Table 5.11** provides examples of questions to ask vendors. Managers and trainers should check every vendor's reputation by contacting prior clients and professional organizations such as the Association for Talent Development (ATD). The consultant's experience should be evaluated. (For example, in what industry has the vendor worked?) Managers should carefully consider the services, materials, and fees outlined in the consulting contract. For example, it is not uncommon for training materials such as manuals and handouts to remain the property of the consultant. If the company wants to use the consultant's materials for training at a later date, it will have to pay additional fees to the consultant.

TABLE 5.11 Questions to Ask Vendors and Consultants

- How much and what type of experience does your company have in designing and delivering training?
- What are the qualifications and experience levels of your staff?
- Can you provide demonstrations or examples of training programs you have developed?
- Can you provide references of clients for whom you have worked?
- What evidence do you have that your programs work?
- What instructional design methods do you use?
- How do your products or services fit our needs?
- What about recurring costs, such as costs related to administering, updating, and maintaining the training program? Do you provide technical support?

Sources: Based on K. Smith-Jentsch, "Making Smart Investments in Training: The Devil is in the Details," *Organizational Dynamics*, 49 (2020): 1–7; C. Anderson, "Do You Have the Right Business Partners?" *Chief Learning Officer* (March 2014), pp. 48–50; B. Chapman, "How to Create the Ideal RFP," *training* (January 2004), pp. 40–43; M. Weinstein, "What Vendors Wished You Knew," *training* (February 2010), pp. 122–25.

When using a consultant or other outside vendor to provide training services, it is also important to consider the extent to which the training program will be customized based on the company's needs or whether the consultant is going to provide training services based on a generic framework that it applies to many different organizations. For example, Towers Perrin, a well-known, successful New York consulting firm, told several clients that it would study their companies in detail and provide a customized diversity training program to fit their needs. However, six companies (including Nissan North America, Thomson Consumer Electronics, and BMO Harris Bank) were given the exact same 18 recommendations (e.g., separate the concept of affirmative action from that of managing diversity).[81]

It is important to keep in mind that you do not have to choose between building a program in-house or purchasing it from a vendor or consulting firm. Many companies are using a mix of training content developed in-house and purchased from vendors. For example, Verizon purchases training content for leadership development but content related to products, services, and pricing is developed by Verizon's trainers. At Johns Hopkins Community Physicians, instructional designers and subject-matter experts develop content specifically related to their training needs. This helps ensure training content is meaningful. When the Ebola virus outbreak occurred, the Clinical Education team worked with infection control experts at Hopkins, who were communicating with the Centers for Disease Control. They quickly produced an instructional video on protective equipment which enabled them to train all their staff in a few weeks.

Using Knowledge Management for Learning and Transfer of Training

Recall from **Chapter Two**, "Strategic Training," that the term *knowledge* refers to what individuals or teams of employees know or know how to do (human and social knowledge), as well as a company's rules, processes, tools, and routines (structured knowledge). Knowledge is either tacit or explicit. *Tacit knowledge* is personal knowledge based on individual experience and is influenced by perceptions and values. Tacit knowledge requires personal communication through discussion and demonstrations. *Explicit knowledge* refers to manuals, formulas, and specifications that are described in formal language. Explicit knowledge can be managed by placing it in a knowledge database, or it can be managed by a knowledge management system.

Knowledge management refers to the process of enhancing company performance by designing and implementing tools, processes, systems, structures, and cultures to create, capture, share, and use knowledge.[82] Knowledge management can help companies get products to market quicker, better serve customers, develop innovative products and services, and attract new employees and retain current ones by giving people the opportunity to learn and develop.

How might knowledge management occur? There are several ways to help create, share, and use knowledge:[83]

1. Use technology, e-mail, and social networking sites (such as Facebook or MySpace) or portals on the company intranet that allow people to store information and share it with others.
2. Publish directories that list what employees do, how they can be contacted, and the type of knowledge they have.
3. Develop informational maps that identify where specific knowledge is stored in the company.
4. Create chief information officer (CIO) and chief learning officer (CLO) positions for cataloging and facilitating the exchange of information in the company.
5. Require employees to give presentations to other employees about what they have learned from training programs that they have attended.
6. Allow employees to take time off from work to acquire knowledge, study problems, attend training, and use technology.
7. Create an online library of learning resources, such as journals, technical manuals, training opportunities, and video seminars.

8. Design office space to facilitate interaction between employees.
9. Create communities of practice (COPs) using face-to-face meetings, wikis, or blogs for employees who share a common interest in a subject (e.g., product, service, customer, or type of problem), where they can collaborate and share ideas, solutions, and innovations.
10. Use “after-action reviews” at the end of each project to review what happened and what can be learned from it.
11. Use storytelling to pass on knowledge. A story provides a description of what happened in a situation (e.g., problem, challenge), the actions taken (e.g., use of knowledge, skill, competency), and the resulting outcomes (e.g., happy customer, leak repaired, sales made).
12. Discuss and record top performers’ passion for their jobs, what people need to know, and what they need to learn.

Knowledge sharing can involve reviews or audits of projects after they are completed, followed by sharing insights gained from the review with other employees. For example, the U.S. Army’s “After-Action Review” process, adopted by many companies, involves a review of every mission, project, or critical activity.[84] The review involves considering four questions: (1) What did we set out to do? (2) What actually happened? (3) Why did it happen? and (4) What do we do (stop doing, continue to do, consider doing) next? Lessons learned are made available through websites and debriefings up and down the army leadership. Research has shown that After-Action Reviews are effective for facilitating team performance and are useful ways to increase leadership behavior following a development program.[85]

Consider how several companies are helping employees create, share, and use knowledge. 3M’s 15 percent rule allows all employees to devote about 15 percent of their worktime to experiment or work on personal projects.[86] A 3M research scientist and his colleagues used their time to experiment with nonwoven fibers. The experiment resulted in the development of filters of various sizes and shapes that can be used in air purifiers to remove contaminants. These filters have played a key role in the fight against COVID-19. 3M does not want managers to track, monitor, or measure employees’ use of the 15 percent rule. Rather, it is encouraged as part of the company’s innovative culture. Western & Southern Financial Group uses a four step knowledge transfer process.[87] The first step, Identify, involves company leaders and the talent development team identifying expertise possessed by subject experts and creating project teams to capture and retain the knowledge. In Initiate, the second step, teams are trained to share and document knowledge. The third step, Implement, occurs over three to four months during which teams share their knowledge retention and sharing plans. The last step, Inspect and Innovate, involves teams reviewing and revising their plans. Western & Southern Financial Group also brings together groups to informally discuss business topics. The Knowledge Cafés have facilitated knowledge sharing and increased cooperation among employees.

Hilton believes that learning through training programs as well as socially is important for facilitating innovation, which the company believes is the responsibility of all employees.[88] To support learning and innovation, team members at Hilton are encouraged to collaborate and share knowledge with managers and peers using online virtual communities. Also, Hilton hosts town hall meetings to share its ideas about the business.

As mentioned in **Chapter One**, “Introduction to Employee Training and Development,” many companies are interested in knowledge management; as older employees retire, these companies are experiencing the loss of explicit and tacit knowledge. To facilitate knowledge sharing at Kapco Metal Stamping, older employees are encouraged to switch to working part time as they near retirement.[89] This helps the company retain their knowledge and have them pass it along to less experienced employees by serving as mentors. The less experienced employees learn not just what more expert employees do but how they do it and why they do it.

Keys for Effective Knowledge Management

There are several key considerations for effective knowledge management. They include collaborating between training and the information technology department, creating leadership positions in charge of knowledge management, providing easy-to-use technology, and ensuring employee trust and willingness to share knowledge.[90]

Training and Information Technology Collaboration

For knowledge management to be effective, the training department and information technology department must collaborate.[91] Training can help develop the culture, as well as the content and learning strategies. Information technology develops the systems for accessing, sharing, and storing knowledge and delivering training. For example, the intranet at the Royal Bank of Canada serves as the central depository for information about initiatives completed, planned, or under way in the company. It also contains templates and other tools for training project managers. A separate website features summaries posted by employees who have attended conferences and courses. Technologists developed the infrastructure, and trainers recommended what features to include.[92] After every U.S. Army mission, project, or critical activity, the lessons learned are identified, codified, and made accessible through websites.[93] The lessons learned include an evaluation of the four simple but critical questions described previously (What did we set out to do? What happened? Why did it happen? and What will we do again the next time and what will we try to improve?). The Center for Army Lessons Learned (CALL) has created a network that has disseminated more than 265,000 products, briefed more than 54,000 soldiers and leaders, and transferred more than 24,000 lessons from military and civilian analysts to forces both in combat and stationed in the United States.

Create Knowledge Management Leadership Positions

A survey of talent professions found that one of the primary barriers to effective knowledge sharing and knowledge management was the lack of defined roles or responsibilities for those areas.[94] In approximately half of the organizations, someone was responsible for knowledge management or for facilitating knowledge sharing. Top-performing organizations were significantly more likely to have an individual or a committee responsible for knowledge management. Some companies have created leadership positions to foster continuous learning and knowledge management. **Chief knowledge officers** are the leaders of a company's knowledge management efforts. But often knowledge management falls under the responsibilities of the company's Chief Information Officer (CIO), Chief Human Resources Officer (CHRO), or Chief Learning Officer (CLO) (discussed in **Chapter Two**) or is a joint-responsibility of these company leaders. These executives' responsibilities include developing, implementing, and linking a knowledge/learning culture with the company's technology infrastructure, including databases and intranets. They locate knowledge and find ways to create, capture, and distribute it. The executive has to ensure that trainers, information technologists, and business units support and contribute to the development of knowledge management practices. The leader also is responsible for actively supporting strategic business objectives by ensuring that knowledge management translates into visible benefits for the business.[95]

Easy-to-Use Technology

Knowledge management systems fail for two reasons: the technology is too complicated or companies don't give enough consideration to how to motivate employees to share knowledge.[96] Knowledge management systems can make it harder, not easier, for employees to perform their jobs. If the system asks employees to use multiple search engines, collaboration tools, and document management software all on different computer systems, the knowledge management system won't be used. It is important to build the correct technology infrastructure and make it easy for employees to access and share information within the context of their jobs. For example, after acquiring Alstom's power businesses, GE used an app to help integrate and encourage knowledge sharing between employees at GE Power and Alstom.[97] The app matched employees with similar skills, education, and experiences, provided them with collaborative spaces where they could virtually interact, and suggested discussion topics.

Employee Trust and Willingness to Share Information

Trust and a willingness to share information are key personal factors that relate to knowledge sharing. Employees may not know or trust other employees, may hoard knowledge to have power over others, may fear that their ideas will be ridiculed or challenged, or may see knowledge sharing as involving too much work and additional responsibility.[98] To encourage knowledge sharing, companies must recognize and promote employees who learn, teach, and share.

One way organizations can encourage knowledge sharing is by giving employees the opportunity to create and edit content. Top-performing organizations are significantly more likely to encourage employees to share user-generated content and recognize and reward those who do so.[99] Consider Cathay Insurance's cloud-based community learning platform.[100] Employees have been trained to produce five-minute microlearning videos focused on job practices and relevant content and store and access them on the platform. The platform facilitates knowledge sharing—learners can ask each other questions and participate in discussion groups. To encourage trainees use of the platform, it includes competitions, point systems, and ranking boards. Data suggest that employees are actively engaged with the platform. Ninety-four percent of all employees have downloaded from the platform, over 100 learning communities have been created, and there are over 35,000 messages posted.

Because knowledge management has the potential to improve a company's competitive position, companies that are managing knowledge use several measures to evaluate the effectiveness of their knowledge management practices. (Evaluation is discussed in detail in **Chapter Six**.) These measures are related to company and customer benefits. They include the ability to attract and retain key employees; employee commitment to the company; the encouragement and facilitation of effective teamwork; the use of best practices and the review and updating of these practices; new product introductions; customer satisfaction; and repeat relationships with customers.[101]

Summary

Learning is an important aspect of any training program. But equally important is encouraging trainees to use learned capabilities on the job (transfer of training). This chapter discussed important program design issues that relate to the three phases of the instructional process: pretraining, the learning event, and post-training. The chapter discussed effective program design, including selecting and preparing the training site, identifying and choosing the best trainers, communicating with trainees, and deciding how trainers can arrange the training site and create an instructional environment that is conducive to learning. Trainees' age, personality, culture, and language should be considered in training design. Making training accessible to all employees is also important. The chapter introduced and discussed the importance of curriculum, curriculum maps, courses, and lessons and showed how to use project management, design documents, and lesson plans in program design. The chapter also provided some advice regarding how to convert face-to-face to online learning. Because many companies do not have the staff, resources, or expertise needed to design training programs, the chapter also discussed how to identify and choose a vendor or consultant for training services.

The chapter concluded by discussing important post-training issues related to transfer of training, including how to create a supportive work environment, provide trainees with self-management skills, and gain manager and peer support. Finally, the important role of knowledge management in facilitating learning and transfer of training was discussed. For employees to use a knowledge management system, it must be easy to find and use, and they need to trust and be willing to share knowledge.

Key Terms

program design *197*

training site *199*

persona *204*

neurodiversity *206*

concept map *208*

application assignments *209*

future letter *209*

icebreaker *210*

curriculum *213*

course *213*

program *213*

terminal learning objective *213*

enabling learning objective *213*

project management *214*

curriculum road map *214*

detailed lesson plan *216*

storyboard *218*

trainee prerequisites *219*

manager support *223*

action plan *224*

support network *227*

opportunity to perform *227*

electronic performance support system (EPSS) *228*

content curation *228*

request for proposal (RFP) *229*

knowledge management *230*

Chief knowledge officers *232*

Discussion Questions

1. What is a design document? What is included in a design document? How is it useful for training?
2. How might course design effectively accommodate employees with autism?
3. How does a concept map help learners?
4. Explain the three phases of the instructional process. Which phase do you think is most important? Why?
5. What can be done to increase the likelihood of transfer of training if the work environment conditions are unfavorable and cannot be changed?
6. Customer service training involves far transfer. What design features would you include in a customer service training program to ensure that transfer of training occurs? What is a curriculum road map? Why is it important?
7. What is an application assignment? Why should it be considered in designing a training program or course?
8. How might you motivate managers to play a more active role in ensuring transfer of training?
9. If you were asked to implement a knowledge management system, what would you recommend to ensure that employees share and access knowledge? Explain your recommendations.
10. What type of seating arrangement would you choose for a training course that involves small-group case discussions? What type of arrangement would you recommend for a lecture that includes PowerPoints and the use of YouTube videos? Explain your choices.

11. List the steps in project management. Discuss how each step helps in effective design.
12. If you were going to conduct a training program, what would you want to know about your potential trainees that would help you design a training session that would be enjoyable for the trainees and help them learn? How would you conduct your audience analysis?
13. What are some of the things a trainer should do to adapt training content and instruction for trainees who are from another country?
14. What is content curation and why is it important for training?
15. What features are necessary to make microlearning effective? Identify and explain how these features facilitate learning.

Application Assignments

1. Develop a questionnaire to measure the degree to which the work environment supports transfer of training. Include the questions and the rating scales that you would use. Use the checklist in **Table 5.11** as an example. Provide a rationale for your choice of rating scales and questions (i.e., why did you include them on your questionnaire?).
2. Listed below are questions designed to measure trainees' motivation to transfer training. Ask several working friends, colleagues, or fellow employees these questions. Also, ask them to discuss why they responded in the way they did. Read each of the following statements. Indicate whether you strongly agree, somewhat agree, somewhat disagree, or strongly disagree with the statement.
   a. The skills and knowledge that I have obtained by attending training programs have been helpful in solving work-related problems.
   b. Before I attend training programs, I usually consider how I will use the content of the program.
   c. I believe my job performance will likely improve if I use the knowledge and skills acquired in training programs.
   d. It is unrealistic to believe that mastering the content of training programs can improve my work productivity.
   e. I am usually able to use skills or knowledge acquired in training programs in my work.
   f. There are usually more problems than the trainers realize in applying training program content in my daily work activities.
   g. Before I attend training programs, I usually identify particular problems or projects that I would like the training to help me with.

   Prepare a written summary of what you learned about motivation to transfer training.
3. Design an action planning sheet that a manager and employee could use to facilitate transfer of training. Justify each category included in the action plan.
4. Draw a curriculum map for your major. How does this help you as the learner? How do you think this helps the faculty? Your academic adviser?
5. Write a future letter for this course. What are the benefits of a future letter for transfer of training?
6. What are some features that should be included in online training to make it more accessible?

7. During the COVID-19 pandemic, most, if not all, of your courses were provided in an online format. Choose one of your courses that you took this way. What features were included to enhance your learning? What other features should be considered to make it an even more enjoyable and effective online learning experience?
8. This assignment relates to Application Assignment 2 in **Chapter Four**. You are the training director for Noe Suites, and you now receive the following e-mail from the vice president of operations. Prepare an answer. Thanks for your recommendations regarding how to make the "Improving Service Quality Program" a success. To improve hotel staff ability to respond effectively to customer complaints (i.e., "recovery"), we have incorporated many of your ideas into the program, including the following:
   a. Having trainees bring an example of a customer problem to class.
   b. Giving trainees the opportunity to practice dealing with irate customers.
   c. Providing trainees with feedback during role plays.
   d. Having trainers identify and communicate objectives of the program to trainees.
   e. Having trainers communicate to the trainees specific key behaviors related to customer service.

   I am now concerned about how to make sure that our training investments pay off. That is, I am really interested in seeing that employees effectively and continuously apply in their jobs the skills and knowledge they have gained in training. What recommendations do you have?
9. Go to http://sans.org, the website for the SANS Institute, which provides information security training. Click on "Training Roadmap" and choose one of the boxes showing the job roles or specialized roles. Review one of the courses listed. Then click on "Full Course Information and Details." What information is provided? How is it useful for learners? For instructors?
10. One way to diagnose transfer of training problems or to ensure that transfer of training occurs is to complete the matrix shown below. This matrix considers the responsibilities of the manager, the trainer, and the trainee for transfer of training before, during, and after training. Complete each cell of the matrix showing manager, trainer, and trainee responsibilities.

	Before Training	During Training	After Training
Manager			
Trainer			
Trainee			

11. Go to www.youtube.com/watch?v=RuiSExp2s7M and watch the training video for new servers at Country Cookin restaurants. What features does this video include that would help new servers learn about the job and their role at Country Cookin? Assume you were an instructional designer or trainer at Country Cookin. Provide your recommendations for designing a training program that includes this video.
12. Watch the YouTube video about knowledge sharing at Accenture at www.youtube.com/watch?v=ssZPn1r5O6c. In what ways does Accenture expect employees to contribute to learning by sharing knowledge? Which way do you believe is most beneficial? Why?
13. You are given the video, "Clean Hands Save Lives: Protect Your Patients, Protect Yourself" (see www.youtube.com/watch?v=3xoPXdpIicw), and asked to use it as part of a training program for veterinarian technicians (employees who assist veterinarians in examining animals). Create a lesson plan, including the video, for a one-hour training program on hand hygiene. Use the sample lesson plan shown in **Table 5.7** as a template for your lesson plan. Discuss your rationale for the content, activities, time, and sequence of activities included in your lesson plan.

14. Watch the YouTube video on designing effective scenario-based e-learning at www.youtube.com/watch?v=f8RE3jZs-bA. How is the designer using storyboarding? What are the advantages of using storyboarding for designing this type of training program? Would storyboarding be useful for designing other types of training? Explain your answer.
15. Watch the YouTube video of an example of a microlearning-based compliance training program at www.youtube.com/watch?v=rUc3xoOs6ts. Which characteristics of effective microlearning are found in this program? Which additional characteristics would you include? Describe those characteristics and explain how and why you would include them.
16. Review the icebreakers shown in the YouTube video at www.youtube.com/watch?v=SZMg5JyL0fc. Which one do you believe will be most effective for opening a face-to-face training session? Explain why.

Case: *Designing Effective Sales Training at Harrison Pharmaceuticals*

Harrison Pharmaceuticals released a revolutionary new cancer drug with the potential to change the entire health landscape. With the need to promote the drug in new and existing territories, it had to increase its sales staff and train on all aspects of the drug's efficacy. Because of industry regulations, the company designed a blended learning program with all the information sales reps would need to explain the drug to all customers, from prescribing clinicians to pharmacists. It featured more than 100 hours of videos including doctor interviews, 2,000 pages of text about in-depth trial results, and an intensive three-day classroom training component. The training program included everything sales reps needed to know. Unfortunately, three months after completing the training program, many sales reps were not competent in their territories and could not answer doctors' questions adequately. One problem with the program was that the sales reps had to learn too much highly technical information. But to be competent, they had to learn all of the information.

What are your recommendations for how the program could be redesigned to help the sales reps recall what they had learned? Provide your recommendations and explain why you believe they will help the sales reps improve their effectiveness.

Source: Based on I. Townley and J. Durkee, "Convert Learning Into Action," *T+D,* December 2019, pp. 42–47.

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CHAPTER SIX

Training Evaluation

Objectives

After reading this chapter, you should be able to

6-1 Explain why evaluation is important.
6-2 Identify and choose outcomes to evaluate a training program.
6-3 Discuss the process used to plan and implement a good training evaluation.
6-4 Discuss the strengths and weaknesses of different evaluation designs.
6-5 Choose the appropriate evaluation design based on the characteristics of the company and the importance and purpose of the training.
6-6 Conduct a cost-benefit analysis for a training program.
6-7 Explain the role of big data, workforce analytics, and dashboards in determining the value of training practices.

Effective Training Using Immersive Methods at Verizon

Verizon's learning and development team uses state-of-the-art training methods to help employees develop new behaviors. For example, Verizon uses virtual reality (VR) to train retail store managers how to handle robberies. Verizon worked with its security and HR business practices groups to identify the most common robbery scenarios, using the information to create scripts. They chose a store, hired actors, and filmed various ways the scenarios could play out, depending on the choices made by the trainees. To participate in the training, managers wear Oculus Go headsets during a 10-minute session in which they see the scenario play out as if they are in the store. The training is so realistic it generates an emotional response, which helps trainees practice being calm under stress and apply the appropriate safety procedures if they have to deal with a robbery. The trainers explain the purpose beforehand and debrief the trainees afterward so they can understand how well they performed relative to the company's standards. The program has been positively evaluated by store managers who have participated in it. Ninety-one percent reported that the VR training was more engaging than the classroom training it replaced. Eighty-nine percent felt more prepared to handle a robbery situation and ninety-five percent believed they developed key skills to handle a robbery situation.

Verizon is also using a similar technology, augmented reality (AR), to train technicians to handle unfamiliar situations they encounter in their work. Using AR, trainees can see the real-world situation while also wearing glasses equipped with a computer that can record videos and display information overlaid on the real world. The technicians can call a coach for live technical assistance, and the coach can view what the technician is seeing and provide instructions. The technicians reported that using AR reduced errors by 62 percent and reduced the time they needed to complete tasks by 72 percent. In addition, managers did not have to spend time fielding questions from technicians.

Sources: Based on S. Castellano, "Leading Through Change," *T+D*, October 2019, pp. 54–56; Y. Noguchi, "Virtual Reality Goes to Work, Helping Train Employees," *Morning Edition* (October 8, 2019), from https://www.npr.org, accessed June 28, 2021; "Training Top 10 Hall of Fame: Outstanding Training Initiatives," *training,* March/April 2019, pp. 90–93; "BEST Award: Verizon," *T+D*, October 2018, from https://www.td.org, accessed June 28, 2021.

Introduction

As the opening vignette illustrates, Verizon wanted to know whether the time, money, and effort devoted to providing state-of-the-art training were making a difference. That is, the training function was interested in assessing the effectiveness of its training programs. **Training effectiveness** refers to the benefits that the company and the trainees receive from training. Benefits for trainees may include learning new skills or behaviors. Benefits for the company may include increased sales and more satisfied customers. A training evaluation measures specific outcomes or criteria to determine the benefits of the program. **Training outcomes** or **criteria** refer to measures that the trainer and the company use to evaluate training programs. To determine the effectiveness of training, an evaluation needs to occur. **Training evaluation** refers to the process of collecting the outcomes needed to determine whether training is effective. For Verizon, the outcomes included trainees' satisfaction, skills to handle a robbery situation, reduction of errors, and less time to complete tasks. The **evaluation design** refers to the collection of information—including what, when, how, and from whom—that will be used to determine the effectiveness of the training program. Any organization that evaluates training has to be confident that training—rather than some other factor—is responsible for changes in the outcomes of interest (e.g., turnover, productivity). The degree of confidence that changes in the outcomes of interest are due to training depends on the type of evaluation design used.

Recall the Instructional Systems Design (ISD) model shown in **Figure 1.2** and the topics covered in **Chapters Two** through **Five.** The information from the needs assessment, the characteristics of the learning environment, and the steps taken to ensure transfer of training should all be used to develop an evaluation plan. In order to identify appropriate training outcomes, a company needs to look at its business strategy, its organizational analysis (Why are we conducting training? How is it related to the business?), its person analysis (Who needs training?), its task analysis (What is the training content?), the learning objectives of the training, and its plan for training transfer.

This chapter will help you understand why and how to evaluate training programs. The chapter begins by discussing the types of outcomes used in training program evaluation. The next section of the chapter discusses the practical factors to consider when choosing an evaluation design and provides an overview of the types of designs. Next, we review the process involved in conducting a program evaluation. The chapter concludes with a discussion of metrics that can be used to evaluate the strategic value of the training function.

Reasons for Evaluating Training

Companies are investing millions of dollars in training programs to help gain a competitive advantage. Companies invest in training because learning creates knowledge; often, it is this knowledge that distinguishes successful companies and employees from those who are not. Research summarizing the results of studies that have examined the linkage between training and human resource outcomes (such as attitudes and motivation, behaviors, and human capital), organizational performance outcomes (performance and productivity), or financial outcomes (profits and financial indicators) has found that companies that conduct training are likely to have more positive human resource outcomes and greater performance outcomes.[1] The influence of training is largest for organizational performance outcomes and human resource outcomes and weakest for financial outcomes. This result is not surprising, given that training can least affect an organization's financial performance and may do so through its influence on human resource practices. As emphasized in **Chapter Two,** "Strategic Training," training is more strongly related to organizational outcomes when it is matched with the organization's business strategy and capital intensity. Because companies have made large-dollar investments in training and education and view training as a strategy to be successful, they expect the outcomes or benefits related to training to be measurable.

Norton Health Care's Practice Manager Development Program focuses on improving practice managers' leadership, practice operations, patient access to care, and patient experience.[2] Program participants share best practices, learn from company leaders, and build a plan for their practice operations. The program has resulted in an increase in the number of new patients accepted, office visits, and patients responding "definitely recommend" on customer surveys following an office visit. At Jiffy Lube, training evaluation involves more than just counting the number of programs employees attend each year.[3] Jiffy Lube's business depends on properly servicing customers' cars so they are satisfied and will be repeat customers. As a result, Jiffy Lube employees must be certified to perform a service. Jiffy Lube tracks both certifications and their relationship to business results. They track both employee and store-level certifications. Entry-level certifications must be completed within 30 days after an employee is hired. Seventy-six percent of Jiffy Lube's stores are at 80–100 percent certification. Of those stores with 100 percent certification, one-third have average customer sales 9 percent higher than all stores.

Training evaluation provides a way to understand the outcomes that investment in training produces and provides the information needed to improve training.[4] If a company receives an inadequate return on its investment in training, the company will likely reduce its investment in training or look for training providers outside the company who can provide training experiences that improve performance, productivity, customer satisfaction, or whatever other outcomes the company is interested in achieving. Training evaluation provides the data needed to demonstrate that training does offer benefits to the company. Training evaluation involves both formative and summative evaluation.[5]

Formative Evaluation

Formative evaluation refers to the evaluation of training that takes place during program design and development. That is, formative evaluation helps ensure that (1) the training program is well organized and runs smoothly, and (2) trainees learn and are satisfied with the program. Formative evaluation provides information about how to make the program better; it usually involves collecting qualitative data about the program. Qualitative data include opinions, beliefs, and feelings about the program. Formative evaluations ask customers, employees, managers, and subject-matter experts (SMEs) their opinions on the description of the training content and objectives and the program design. These people are also asked to evaluate the clarity and ease of use of a part of the training program that is demonstrated to them in the way that it will be delivered (e.g., online, face-to-face, or using video).[6] The formative evaluation is conducted either individually or in groups before the program is made available to the rest of the company. Trainers may also be involved to measure the time requirements of the program. As a result of the formative evaluation, training content may be changed to be more accurate, easier to understand, or more appealing. The training method can be adjusted to improve learning (e.g., provide trainees with more opportunities to practice or give feedback). Also, introducing the training program as early as possible to managers and customers helps in getting them to buy into the program, which is critical for their role in helping employees learn and transfer skills. It also allows their concerns to be addressed before the program is implemented.

Formative evaluation involves pilot testing. **Pilot testing** refers to the process of previewing the training program with potential trainees and managers or with other customers (persons who are paying for the development of the program). Pilot testing can be used as a "dress rehearsal" to show the program to managers, trainees, and customers. It should also be used for formative evaluation. For example, a group of potential trainees and their managers may be asked to preview or pilot test a web-based training program. As they complete the program, trainees and managers may be asked to provide their opinions about whether graphics, videos, or music used in the program contributed to (or interfered with) learning. They may also be asked how easy it was to move through the program and complete the exercises, and they may be asked to evaluate the quality of feedback the training program provided after they completed the exercises. The information gained from this preview would be used by program developers to improve the program before it is made available to all employees. Nebraska Medicine developed a brief instructor-led program to improve patients' first impressions when they visited the clinic.[7] The training was pilot tested in smaller departments that used patient photos as a way to identify them. The staff reported that the photos did not help quickly and accurately identify patients. As a result, the program was changed to emphasize documenting a description of the patient in their electronic health record. Also, in the documentation the staff was asked to identify where the patients were sitting in the reception area so they could be correctly and personally greeted by the nurse escorting them to the exam room.

Summative Evaluation

Summative evaluation refers to an evaluation conducted to determine the extent to which trainees have changed as a result of participating in the training program. That is, have trainees acquired knowledge, skills, attitudes, behaviors, or other outcomes identified in the training objectives? Summative evaluation may also include measuring the monetary benefits (also known as *return on investment* or *ROI*) that the company receives from the program. Summative evaluation usually involves collecting quantitative (numerical) data through tests, ratings of behavior, or objective measures of performance such as volume of sales, accidents, or patents.

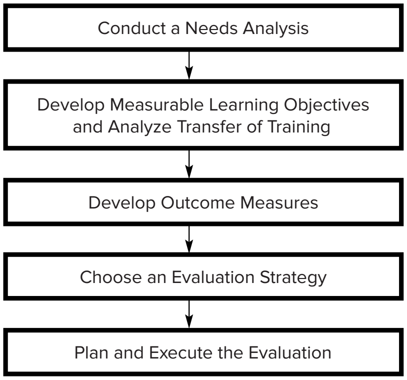
From the discussion of summative and formative evaluation, it is probably apparent to you why a training program should be evaluated:

1. To identify the program's strengths and weaknesses. This includes determining if the program is meeting the learning objectives, if the quality of the learning environment is satisfactory, and if transfer of training to the job is occurring.
2. To assess whether the content, organization, and administration of the program—including the schedule, accommodations, trainers, and materials—contribute to learning and the use of training content on the job.
3. To identify which trainees benefit most or least from the program.
4. To assist in marketing programs through the collection of information from participants about whether they would recommend the program to others, why they attended the program, and their level of satisfaction with the program.
5. To determine the financial benefits and costs of the program.
6. To compare the costs and benefits of training versus nontraining investments (such as work redesign or a better employee selection system).
7. To compare the costs and benefits of different training programs to choose the best program.

Overview of the Evaluation Process

Before the chapter explains each aspect of training evaluation in detail, you need to understand the evaluation process, which is summarized in **Figure 6.1**. The previous discussion of formative and summative evaluation suggests that training evaluation involves scrutinizing the program both before and after the program is completed. **Figure 6.1** emphasizes that training evaluation must be considered by managers and trainers before training has actually occurred. As was suggested earlier in this chapter, information gained from the training design process shown in **Figure 6.1** is valuable for training evaluation.

FIGURE 6.1 The Evaluation Process



Sources: Based on J. Kirkpatrick and W. Kirkpatrick, "Create Training that Produces Business Results," *training* (March/April 2020): 18; D. A. Grove and C. Ostroff, "Program Evaluation," *in Developing Human Resources*, ed. K. N. Wexley (Washington, D.C.: Bureau of National Affairs, 1991), pp. 5-185–5-220; K. Kraiger, D. McLinden, and W. Casper, "Collaborative Planning for Training Impact," *Human Resource Management* (Winter 2004), pp. 337–51.

The evaluation process should begin with determining training needs (as discussed in **Chapter Three**, "Needs Assessment"). Needs assessment helps identify what knowledge, skills, behaviors, or other learned capabilities are needed. Needs assessment also helps identify where the training is expected to have an impact. Needs assessment helps focus the evaluation by identifying the purpose of the program, the resources needed (human, financial, and company), and the outcomes that will provide evidence that the program has been effective.[8] The next step in the process is to identify specific, measurable training objectives to guide the program. The characteristics of good objectives are discussed in **Chapter Four**, "Learning and Transfer of Training." The more specific and measurable these objectives are, the easier it is to identify relevant outcomes for the evaluation. Besides considering the learning and program objectives in developing learning outcomes, it is also important to consider the expectations of those individuals who support the program and have an interest in it (stakeholders such as trainees, managers, and trainers).[9] If the needs assessment is done well, the stakeholders' interests are likely to overlap considerably with the learning and program objectives. Analysis of the work environment to determine transfer of training (discussed in **Chapter Five**, "Program Design") can be useful for determining how training content will be used on the job. Based on the learning objectives and analysis of transfer of training, outcome measures are identified and developed to assess the extent to which learning and transfer have occurred. Impact mapping is often used to identify and develop outcome measures.[10] **Impact mapping** refers to the process of using a small group of individuals who are stakeholders in training (SMEs, instructional designers, managers of trainees) to identify and agree on training program outcomes. The stakeholders can answer questions such as "What knowledge, skills, and behaviors will result from participating in the training program?", "If, and how, will the program affect job performance?", and "How will the company benefit?".

Once the outcomes have been identified, the next step is to determine an evaluation strategy. Factors such as expertise, how quickly the information is needed, change potential, and the organizational culture should be considered in choosing a design. Planning and executing the evaluation involves previewing the program (formative evaluation), as well as collecting training outcomes based on the evaluation design. The results of the evaluation are used to modify, market, or gain additional support for the program. The results of the evaluation should also be used to encourage all stakeholders in the training process—including managers, employees, and trainers—to design or choose training that helps the company meet its business strategy and helps managers and employees meet their goals.[11]

Outcomes Used in the Evaluation of Training Programs

To evaluate its training program, a company must decide *how* it will determine the program's effectiveness, that is, it must identify what training outcomes or criteria it will measure.

Table 6.1 shows the six categories of training outcomes: reaction outcomes, learning or cognitive outcomes, behavior and skill-based outcomes, affective outcomes, results, and return on investment.[12]

TABLE 6.1 Evaluation Outcomes

Outcome or Criterion	Level	What Is Measured	Examples	Measurement Methods	Question
Reactions	1	Learners' satisfaction	• Comfortable training room • Useful materials and program content	• Surveys Interviews	Did they like it?
Learning or cognitive	2	Principles, facts, techniques, procedures, or processes that the learners have acquired	• Electrical principles • Safety rules • Steps in interviewing	• Tests • Work samples	What did they learn?
Behavior and skill-based	2 or 3	Interpersonal technical or motor skills or behaviors acquired by learners	• Preparing a dessert • Sawing wood • Landing an airplane • Listening	• Tests • Observations • Self, peer, customer, and/or managers' ratings • Work samples	Do they use it?

Outcome or Criterion	Level	What Is Measured	Examples	Measurement Methods	Question
Affective	2, 3, or 4	Learners' attitudes and motivation	• Tolerance for diversity • Safety attitudes • Customer service orientation • Engagement	• Attitude surveys • Interviews • Focus groups	Did it change their attitudes?
Results	4	Payoffs for the company	• Productivity • Quality • Costs • Repeat customers • Customer satisfaction • Accidents	• Observation • Performance data from records or company databases	Did it impact the bottom line?
Return on investment	5	Identification and comparison of learning benefits with costs	• Dollar value of productivity divided by training costs	• Economic value	What is the return from investing in learning?

Sources: Based on K. Kraiger, J. K. Ford, and E. Salas, "Application of Cognitive, Skill-based, and Affective Theories of Learning Outcomes to New Methods of Training Evaluation," *Journal of Applied Psychology* 78(2) (1993), pp. 311–28; K. Kraiger, "Decision-Based Evaluation." In *Creating, Implementing, and Managing Effective Training and Development,* ed. K. Kraiger. San Francisco: Jossey-Bass, 2002, pp. 331–375; D. Kirkpatrick, "Evaluation." In *The ASTD Training and Development Handbook*, 2nd ed., ed. R.L. Craig. New York: McGraw-Hill, 1996, pp. 294–312.

Table 6.1 shows training outcomes, the level they correspond to in Kirkpatrick's evaluation model, a description of each of the outcomes and how they are measured, and the question that each outcome can help answer. Kirkpatrick's original evaluation model included only four levels (reaction, learning, behavior, and results), but recent thinking suggests a fifth level—return on investment (ROI)—is necessary to demonstrate the financial value of training. Both level 1 and level 2 outcomes (reactions and learning) are collected at the completion of training, before trainees return to the job. Level 3 outcomes (behavior/skills) can also be collected at the completion of training to determine trainees' behavior or skill level at that point. To determine whether trainees are using training content back on the job (i.e., whether transfer of training has occurred), level 3, level 4, and/or level 5 outcomes can be collected. Level 3 criteria can be collected to determine whether behavior/skills are being used on the job. Level 4 and level 5 criteria (results and ROI) can also be used to determine whether training has resulted in an improvement in business results, such as productivity or customer satisfaction. These criteria also help determine whether the benefits of training exceed their costs. Keep in mind that the levels do not indicate the importance of the outcomes or that lower-level outcomes cause higher-level outcomes.[13] That is, reactions cause learning, which in turn influences skills and results. The outcomes that are collected in evaluation are based on training needs, program objectives, and the strategic reasons for training. We discuss this in the section "Evaluation Practices," later in the chapter.

Reaction Outcomes

Reaction outcomes refer to trainees' perceptions of the program, including the facilities, trainers, and content. (Reaction outcomes are often referred to as a measure of "creature comfort.") They are often called *class* or *instructor evaluations*. This information is typically collected at the program's conclusion. You probably have been asked to complete class or instructor evaluations either at the end of a college course or a training program at work. Reactions are useful for identifying what trainees thought was successful or what inhibited learning. Reaction outcomes are level 1 (reaction) criteria in Kirkpatrick's framework.

Reaction outcomes are typically collected via a questionnaire completed by trainees. A reaction measure should include questions related to the trainee's satisfaction with the instructor, training materials, and training administration (e.g., ease of registration and accuracy of course description), as well as the clarity of course objectives and usefulness of the training content.[14] **Table 6.2** shows a reaction measure that contains questions about these areas. For example, Pharmaceutical Product Development's performance management training program is designed to improve employee engagement across the company.[15] Results from data collected using a reaction measure showed that 85 percent of trainees indicated that the knowledge and skills learned can be immediately applied to their job. More than 83 percent of trainees reported that the training was a worthwhile investment.

TABLE 6.2 Sample Reaction Measure

Read each statement below. Indicate the extent to which you agree or disagree with each statement using the scale below				
Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
1	2	3	4	5

1. I had the knowledge and skills needed to learn in this course.
2. The facilities and equipment made it easy to learn.
3. The course met all of the stated objectives.
4. I clearly understood the course objectives.
5. The way the course was delivered was an effective way to learn.
6. The materials I received during the course were useful.
7. The course content was logically organized.
8. There was enough time to learn the course content.
9. I felt that the instructor wanted us to learn.
10. I was comfortable asking the instructor questions.
11. The instructor was prepared.
12. The instructor was knowledgeable about the course content.
13. I learned a lot from this course.
14. What I learned in this course is useful for my job.
15. The information I received about the course was accurate.
16. Overall, I was satisfied with the instructor.
17. Overall, I was satisfied with the course.

Reaction measures can also include open-ended questions that ask learners about their experience.[16] Examples of open-ended questions include, "What did you learn that you are most likely to try on the job?" and "What topics covered in the class still seem confusing?" These types of questions will take longer to review than analyzing items such as those shown in **Table 6.2**, but they can potentially provide more detailed suggestions about how to improve program design and delivery.

An accurate evaluation needs to include all the factors related to a successful learning environment.[17] Most instructor or class evaluations include several different types of items. Some of these items are related to the trainer's preparation, delivery, ability to lead a discussion, organization of the training materials and content, use of visual aids, presentation style, ability and willingness to answer questions, and ability to stimulate trainees' interest in the course. These items come from trainer's manuals, trainer certification programs, and observation of successful trainers. Other items are related to the relevance or usefulness of the course from the trainees' perspective. Research suggests that if trainee reactions are poor, the trainer rather than the course content is most likely the cause.[18]

Conventional wisdom suggests that trainees who like a training program (who have positive reactions) learn more and are more likely to change behaviors and improve their performance (transfer of training). Is this really the case? Studies suggest that reactions have the largest relationship to changes in affective learning outcomes.[19] Also, research has found that reactions are significantly related to changes in declarative and procedural knowledge, which challenges previous research suggesting that reactions are unrelated to learning. For courses such as diversity training or ethics training, trainee reactions are especially important because they affect learners' receptivity to attitude change. Reactions have been found to have the strongest relationship with post-training motivation, trainee self-efficacy, and declarative knowledge when technology is used for instructional delivery. This suggests that it is important to ensure that it is easy for trainees to access online or e-learning training methods and the training content is meaningful (i.e., linked to their current job experiences, tasks, or work issues).

Some companies are evaluating learners' satisfaction using a Net Promoter Score (NPS).[20] A **Net Promoter Score (NPS)** refers to a score designed to measure employees' satisfaction with a course offering by asking them to rate the likelihood of recommending it to a peer by using a 0–10 point scale. The number on the scale that an employee chooses is then classified into one of three categories: "Detractors" (0–6 on the scale), "Passives" (7–8 on the scale), or "Promoters" (9–10 on the scale). Then, using a formula ((Number of Promoters − Number of Detractors)/(Number of Respondents) × 100), the NPS is computed. For example, consider 100 employees who complete the same online course and provide ratings. The ratings are in the following categories: 5 ratings in the "Detractors" category; 25 ratings in the "Passives" category; and 70 ratings in the "Promoters" category. The NPS is computed by using the formula (70 Promoters − 5 Detractors)/(100 Respondents) × 100 = 65, so the NPS is 65. For example, the U.S. Department of Agriculture's Animal Plant and Health Inspection Service (APHIS) runs its supervisor skills training program several times each year.[21] They ask trainees in every program to rate the likelihood they would recommend it to their peers. The average NPS across all programs run each year was 92. This suggests that almost every trainee would recommend the training to their peers.

NPS scores can range from −100 to 100. The NPS has several advantages over traditional reaction measures. One advantage is that it is simple for learners to complete. Another is that it gives a better idea of learners' overall reaction to a program than an average score on a typical reaction measure. For example, if you found that the average of 100 learners' ratings (where 1 = highly dissatisfied and 5 = highly satisfied) with a training course was 3.2, it would be difficult to interpret what that means without looking at the distribution of ratings. Also, the NPS allows you to identify learners who like the course (Promoters) and those who do not (Detractors), so you can follow up with them to better understand the reasons for their ratings. This information can be used to improve the learning experience. A third advantage of the NPS is that it is commonly used to measure customer satisfaction in other aspects of the business. This means it is more likely to be easily understood and accepted as a measure of effectiveness by professionals working in other aspects of the business such as marketing or sales. A disadvantage of the NPS is that because it is based on one question it doesn't provide a detailed assessment of important aspects of the training that other reactions measure, such as the facilities, the instructor, or the content. To gain the benefits of traditional reaction outcomes and NPS you might want to consider collecting both.

Learning or Cognitive Outcomes

Cognitive outcomes are used to determine the degree to which trainees are familiar with the principles, facts, techniques, procedures, and processes emphasized in the training program. Cognitive outcomes measure what knowledge trainees learned in the program. Cognitive outcomes are level 2 (learning) criteria in Kirkpatrick's framework. Typically, pencil-and-paper tests or self-assessments are used to assess cognitive outcomes. **Self-assessments** refer to learners' estimates of how much they know or have learned from training. Tests and quizzes rather than self-assessments are the preferred measures of learning. This is because self-assessments are only moderately related to learning and are influenced by how much learners liked the course or were motivated to learn rather than what they actually learned.[22] **Table 6.3** provides an example of items from a pencil-and-paper test used to measure trainees' knowledge of decision-making skills. These items help measure whether a trainee knows how to make a decision (the process that he or she would use). They do not help to determine whether the trainee will actually use decision-making skills on the job.

TABLE 6.3 Sample Test Items Used to Measure Learning

For each question, check all that apply.

1. If my boss returned a piece of work to me and asked me to make changes on it, I would:
   — Prove to my boss that the work didn't need to be changed.
   — Do what the boss said, but ask where the boss thought changes were needed.
   — Make the changes without talking to my boss.
   — Request a transfer from the department.

2. If I were setting up a new process in my office, I would:
   — Do it on my own, without asking for help.
   — Ask my boss for suggestions.
   — Ask the people who work for me for suggestions.
   — Discuss it with friends outside the company.

Source: Based on A. P. Carnevale, L. J. Gainer, and A. S. Meltzer, *Workplace Basics Training Manual* (San Francisco: Jossey-Bass, 1990), pp. 8–12.

Paychex Inc.'s sales program includes self-paced e-learning modules and a dedicated learning coach who facilitates ongoing virtual coaching.[23] Sales reps use a video coaching app to practice, present, fail, and practice keys skills with their learning coach and manager. Paychex uses certification exams to determine what employees have learned. New hires showed they had obtained advanced knowledge and skill proficiency as measured by the certification process at nine weeks.

Behavior and Skill-Based Outcomes

Skill-based outcomes are used to assess the level of technical or motor skills and behaviors. Skill-based outcomes include acquisition or learning of skills (skill learning) and use of skills on the job (skill transfer). Skill-based outcomes relate to Kirkpatrick's level 2 (learning) and level 3 (behavior). The extent to which trainees have learned skills can be evaluated by observing their performance in work samples such as simulators. Skill transfer is usually determined by observation. For example, a resident medical student may perform surgery while the surgeon carefully observes, giving advice and assistance as needed. Trainees may be asked to provide ratings of their own behavior or skills (self-ratings). Peers, managers, and subordinates may also be asked to rate trainees' behavior or skills based on their observations. Because research suggests that the use of only self-ratings likely results in an inaccurately positive assessment of skill or behavior transfer of training, it is recommended that skill or behavior ratings be collected from multiple perspectives (e.g., managers and subordinates or peers).[24] **Table 6.4** shows a sample rating form used to measure behavior. This form was used as part of an evaluation of a training program developed to improve school principals' management skills. To evaluate several of its training programs, Jiffy Lube managers observe and use a checklist to evaluate service center employees' skills in performing automobile services they learned in an online course. The manager has to verify that the employee is proficient in the skill to gain certification.[25]

TABLE 6.4 Sample Rating Form Used to Measure Behavior

<table>
<tr><td colspan="5">Rating task: Consider your opportunities over the past three months to observe and interact with the principal/assistant principal you are rating. Read the definition and behaviors associated with the skill. Then complete your ratings using the following scale:</td></tr>
<tr><td>Always</td><td>Usually</td><td>Sometimes</td><td>Seldom</td><td>Never</td></tr>
<tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr>
<tr><td colspan="5">I. Sensitivity: Ability to perceive the needs, concerns, and personal problems of others; tact in dealing with persons from different backgrounds; skill in resolving conflict; ability to deal effectively with people concerning emotional needs; knowing what information to communicate to whom.</td></tr>
<tr><td colspan="5">To what extent in the past three months has the principal or assistant principal:
— 1. Elicited the perceptions, feelings, and concerns of others?
— 2. Expressed verbal and nonverbal recognition of the feelings, needs, and concerns of others?
— 3. Taken actions that anticipated the emotional effects of specific behaviors?
— 4. Accurately reflected the point of view of others by restating it, applying it, or encouraging feedback?
— 5. Communicated all information to others that they needed to perform their job?
— 6. Diverted unnecessary conflict with others in problem situations?</td></tr>
<tr><td colspan="5">II. Decisiveness: Ability to recognize when a decision is required and act quickly. (Disregard the quality of the decision.)</td></tr>
<tr><td colspan="5">To what extent in the past three months has this individual:
— 7. Recognized when a decision was required by determining the results if the decision was made or not made?
— 8. Determined whether a short- or long-term solution was most appropriate to various situations encountered in the school?
— 9. Considered decision alternatives?
—10. Made a timely decision based on available data?
—11. Stuck to decisions once they were made, resisting pressures from others?</td></tr>
</table>

Affective Outcomes

Affective outcomes include attitudes and motivation. Affective outcomes that might be collected in an evaluation include tolerance for diversity, employee engagement, motivation to learn, safety attitudes, and customer service orientation. Affective outcomes can be measured using surveys. **Table 6.5** shows an example of questions on a survey used to measure career goals, plans, and interests. The specific attitude of interest depends on the program objectives. Affective outcomes relate to Kirkpatrick's level 2 (learning), level 3 (behavior), or level 4 (results), depending on how they are evaluated. If trainees are asked about their attitudes on a survey, that would be considered a learning measure. For example, attitudes toward career goals and interests might be an appropriate outcome to use in evaluating training that focuses on employees self-managing their careers. Consider how Microchip Technology and Tarkett North America use affective outcomes in training evaluation.[26] Microchip Technology has experienced growth through strategically acquiring other companies. Integrating acquired employees into Microchip's culture and helping them understand its values is important for making acquisitions successful. Microchip's learning and development team assists the integration of acquired companies by providing customized training. One measure used to determine the effectiveness of the training is the company's annual engagement survey. Engagement survey results have met the company's goal of 80 percent positive responses across all categories that were assessed. Tarkett North America, a manufacturing company, requires all of its managers to attend a four-day leadership course. The course objectives are to communicate the company's culture, provide common processes and tools for the managers to use, and develop managers' skills to coach their employee teams. Tarkett uses data from its biannual employee survey to evaluate the effectiveness of the leadership course. Seventy-eight percent of employees think their manager does a good job in setting work objectives and being accessible when needed, an improvement of 8 percent since before the course was required.

TABLE 6.5 Example of Affective Outcomes: Career Goals, Plans, and Interests

1. At this time, I have a definite career goal in mind.
2. I have a strategy for achieving my career goals.
3. My manager is aware of my career goals.
4. I have sought information regarding my specific areas of career interest from friends, colleagues, or company career sources.
5. I have initiated conversations concerning my career plans with my manager.

Results

Results are used to determine the training program's payoff for the company. Examples of results outcomes include increased production and reduced costs related to employee turnover rates of top talent (managers or other employees), accidents, and equipment downtime, as well as improvements in product quality or customer service.[27] Results outcomes are level 4 (results) criteria in Kirkpatrick's framework. For example, consider the results outcomes used by BNSF and DISH.[28] BNSF provided web-based training on defensive driving course to improve driver safety. Some 5,200 BNSF employees took the course. BNSF found that violations for BNSF's truck drivers declined by 11.3 percent compared to the prior five years and overall there was a 30 percent reduction in company vehicle accident. DISH created a training program that teaches sales agents principles for having meaningful customer interactions (listen, care, and connect). As a result, customer satisfaction scores increased 5 percent over six months.

Return on Investment

Return on investment (ROI) refers to comparing the training's monetary benefits with the cost of the training. ROI is often referred to as level 5 evaluation (see **Table 6.1**). Level 5 (ROI) measures return on investment (the financial results). ROI is calculated as the net benefit (benefits minus costs) divided by the program costs, multiplied by 100 to convert it into a percentage.

For example, assume that a new safety training program results in a decline of 5 percent in a company's accident rate. This provides a total annual savings (the benefit) of $150,000 in terms of lost workdays, material and equipment damage, and workers' compensation costs. The training program costs $50,000 to implement (including both direct and indirect costs). To calculate the ROI, you need to subtract the training costs from the benefits, divide by the costs, and multiply by 100. That is, ROI = [(150,000 − 50,000) ÷ 50,000] × 100% = 200%. The ROI for this program is 200 percent. Another way to think about ROI is to consider it as a ratio based on the return for every dollar spent. In this example, the company gains a net benefit of $2 for every $1 spent. This means the ROI is 2:1. Training costs can be direct and indirect.[29] **Direct costs** include salaries and benefits for all employees involved in training, including trainees, instructors, consultants, and employees who design the program; program material and supplies; equipment or classroom rentals or purchases; and travel costs. **Indirect costs** are not related directly to the design, development, or delivery of the training program. They include general office supplies, facilities, equipment, and related expenses; travel and expenses not directly billed to one program; training department management and staff salaries not related to any one program; and administrative and staff support salaries. **Benefits** are the value that a company gains from the training program.

For example, Discover Financial Services found that for every dollar the company invested in its tuition reimbursement program, the company received the dollar back plus an additional $1.44 in savings.[30] The savings resulted from lower employee turnover and absenteeism and increased skills.

Determining Whether Outcomes Are Appropriate

An important issue in choosing outcomes is to determine whether they are appropriate. That is, are these outcomes the best ones to measure to determine whether the training program is effective? Appropriate training outcomes need to be relevant, reliable, discriminative, and practical.[31]

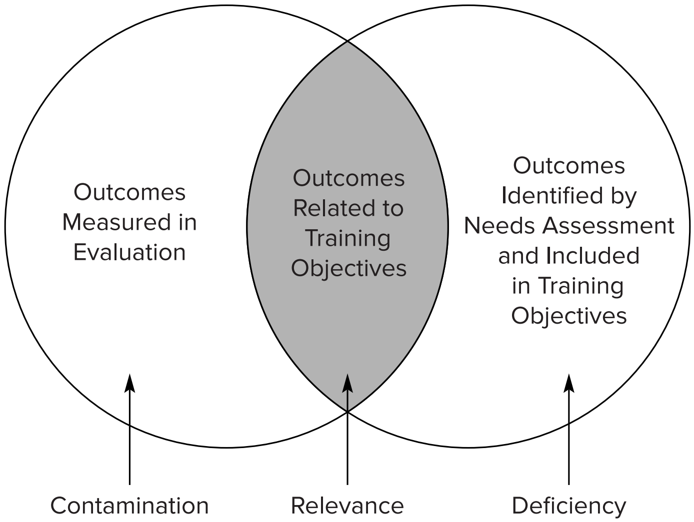
Relevance

Criteria relevance refers to the extent to which training outcomes are related to the learned capabilities emphasized in the training program. The learned capabilities required to succeed in the training program should be the same as those required to be successful on the job. The outcomes collected in training should be as similar as possible to what trainees learned in the program. That is, the outcomes need to be valid measures of learning. One way to ensure the relevancy of the outcomes is to choose outcomes based on the learning objectives for the program. Recall from **Chapter Four** that learning objectives show the expected action, the conditions under which the trainee is to perform, and the level or standard of performance.

Figure 6.2 shows two ways that training outcomes may lack relevance. **Criterion contamination** refers to the extent that training outcomes measure inappropriate capabilities or are affected by extraneous conditions. For example, if managers' evaluations of job performance are used as a training outcome, trainees may receive higher ratings of job performance simply because the managers know they attended the training program; because the managers believe the program is valuable, they may give high ratings to ensure that the training looks like it positively affects performance.

Criteria may also be contaminated if the conditions under which the outcomes are measured vary from the learning environment. That is, trainees may be asked to perform their learned capabilities using equipment, time constraints, or physical working conditions that are not similar to those in the learning environment. For example, trainees may be asked to demonstrate spreadsheet skills using a newer version of spreadsheet software than they used in the training program. This demonstration likely will result in no changes in their spreadsheet skills from pretraining levels. In this case, poor-quality training is not the cause for the lack of

FIGURE 6.2 **Criterion Deficiency, Relevance, and Contamination**



change in their spreadsheet skills. Trainees may have learned the necessary spreadsheet skills, but the environment for the evaluation differs substantially from the learning environment, so no change in skill level is observed.

Criteria may also be deficient. **Criterion deficiency** refers to the failure to measure training outcomes that were emphasized in the training objectives. For example, the objectives of a spreadsheet skills training program emphasize that trainees both understand the commands available on the spreadsheet (e.g., compute) and use the spreadsheet to calculate statistics using a data set. An evaluation design that uses only learning outcomes such as a test of knowledge of the purpose of keystrokes is deficient because the evaluation does not measure outcomes that were included in the training objectives (e.g., use a spreadsheet to compute the mean and standard deviation of a set of data).

Reliability

Reliability refers to the degree to which outcomes can be measured consistently over time. For example, a trainer gives restaurant employees a written test measuring knowledge of safety standards to evaluate a safety training program that they attended. The test is given before (pretraining) and after (post-training) employees attend the program. A reliable test includes items for which the meaning or interpretation does not change over time. A reliable test allows the trainer to have confidence that any improvements in post-training test scores from pretraining levels are the result of learning that occurred in the training program, not test characteristics (e.g., items are more understandable the second time) or the test environment (e.g., trainees performed better on the post-training test because the classroom was more comfortable and quieter).

Discrimination

Discrimination refers to the degree to which trainees' performance on the outcome actually reflects true differences in performance. For example, a paper-and-pencil test that measures electricians' knowledge of electrical principles must detect true differences in trainees' knowledge of electrical principles. That is, the test should discriminate on the basis of trainees' knowledge of electrical principles. (People who score high on the test have a better understanding of the principles of electricity than do those who score low.)

Practicality

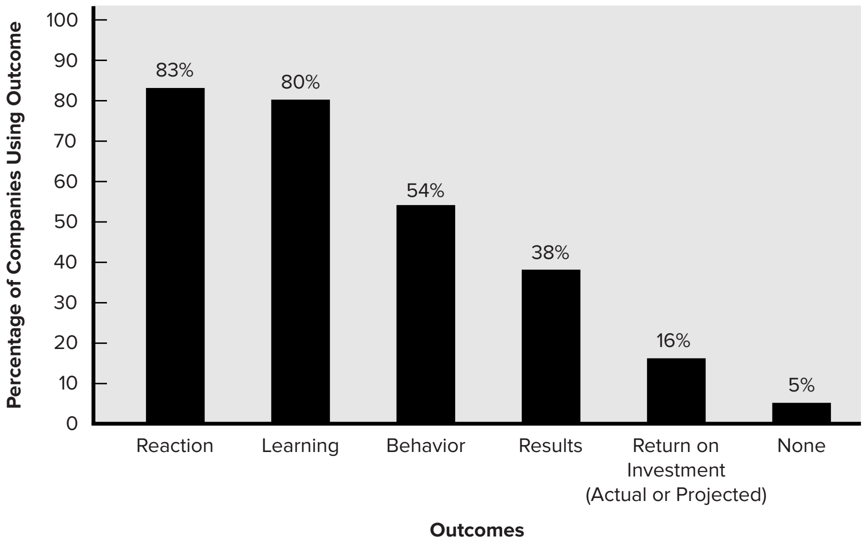
Practicality refers to the ease with which the outcome measures can be collected. One reason companies give for not including learning, performance, and behavior outcomes in their evaluation of training programs is that collecting these data is too burdensome. (It takes too much time and energy, which detracts from the business.) For example, in evaluating a sales training program, it may be impractical to ask customers to rate the salesperson's behavior because this would place too much of a time commitment on the customer (and probably damage future sales relationships).

Evaluation Practices

Figure 6.3 shows outcomes used in training evaluation practices. As **Figure 6.3** shows, reactions (an affective outcome) and learning or cognitive outcomes are the most frequently used outcomes in training evaluation. The use of outcomes varies by the type of training program.[32] Leadership development, sales, and coaching programs are most likely to be evaluated using reaction outcomes. Learning outcomes are most frequently used in evaluations of technical skills programs and mandatory and compliance programs. Although these outcomes are important, they do not assess whether training has changed behavior on the job or whether it is having a positive impact on business results. Perhaps this is why only 40 percent of learning professionals agree that their evaluation practices help meet their organization's business goals.[33] Despite the less frequent use of behavioral and results outcomes, research suggests that training can have a positive effect on these outcomes.[34]

There are a number of reasons why companies don't evaluate training. Learning professionals report that access to results and tools needed to obtain them are the most significant barriers.[35] Access to results is often determined by the extent to which managers and leaders understand the need for evaluation and support it. Getting key stakeholders (managers, executives) to understand the importance of training and its link to business goals and their involvement in designing training (recall our discussion in **Chapters Two** and **Three**)

FIGURE 6.3 **Training Evaluation Practices**



Source: Based on S. Robinson, *Effective Evaluation* (Alexandria, VA: Association for Talent Development, 2019).

can help you get access to the type of data needed to conduct an evaluation. But to gain managers' support for evaluation and to conduct an effective evaluation, you need to identify and assess relevant and important outcomes and choose and implement the appropriate evaluation design.

Which Training Outcomes Should Be Collected?

From our discussion of evaluation outcomes and evaluation practices, you may have the mistaken impression that it is necessary to collect all five levels of outcomes to evaluate a training program. While collecting all five levels of outcomes is ideal, the training program objectives determine which ones should be linked to the broader business strategy, as discussed in **Chapter Two.** To ensure adequate training evaluation, companies should collect outcome measures related to both learning (levels 1 and 2) and transfer of training (levels 3, 4, and 5).

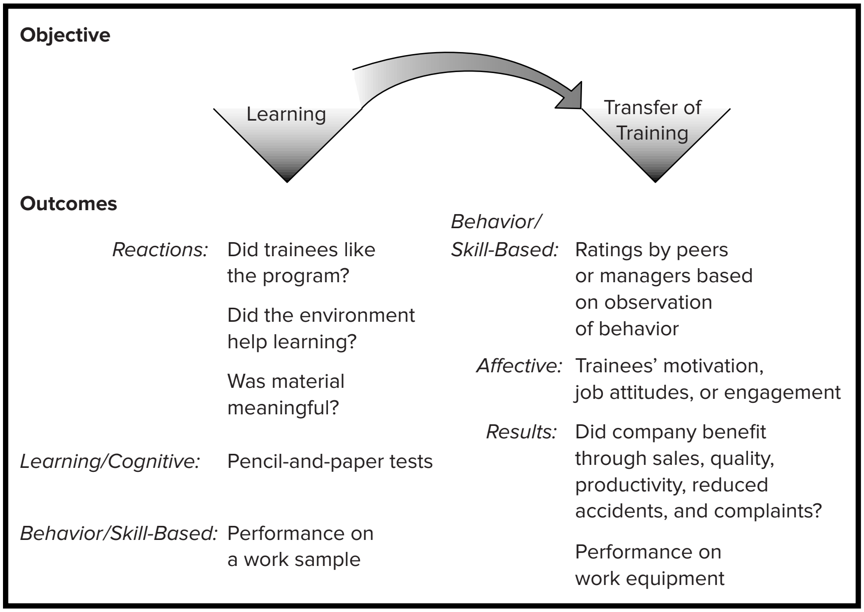
One way to help determine which training outcomes should be collected is to use the logic model. The **logic model** refers to the process used to identify the relationship between training resources, training activities, and program outcomes.[36] There are several steps involved in using the logic model. First, you need to identify the strategic goal and training program goal. Next, you identify the training resources used to design training activities and the training activities used to accomplish the program goals. The last step involves identifying short-term outcomes resulting from the activities (reaction and learning outcomes) and more intermediate and long-term outcomes (behavior and results outcomes).

It is important to recognize the limitations of choosing to measure only reaction and cognitive outcomes. Consider the previous discussions of learning and transfer of training in **Chapters Four** and **Five**. Remember that for training to be successful, learning *and* transfer of training must occur. **Figure 6.4** shows the multiple objectives of training programs and their implication for choosing evaluation outcomes. Training programs usually have objectives related to both learning and transfer. That is, they want trainees to acquire knowledge and cognitive skills and also to demonstrate the use of the knowledge or strategies they learned in their on-the-job behavior. As a result, to ensure an adequate training evaluation, companies must collect outcome measures related to both learning and transfer.

Verizon created its Sales Leadership Academy (SLA) for the company's 6,000-plus Verizon Wireless Retail Sales leaders.[37] The objective of SLA is to engage, enable, and empower the Retail leaders to deliver strong financial results while providing the leadership needed to change the retail business over the next three years. Verizon evaluates SLA program using level 1, level 2, level 3, and level 4 outcomes. The outcomes include participants' confidence they can apply the knowledge and skills emphasized in the program on the job (level 1), actual knowledge gained (level 2), survey results of leadership behaviors such as engaging and empowering their direct reports (level 3), and key retail performance indicators including average transaction time and average credits per sales transaction (level 4). Note that outcome measures are not perfectly related to each other. That is, it is tempting to assume that satisfied trainees learn more and will apply their knowledge and skills to the job, resulting in behavior change and positive results for the company. However, research indicates that the relationships among reaction, cognitive, behavior, and results outcomes are small.[38]

Which training outcomes measure is best? The answer depends on the training objectives. For example, if the instructional objectives identify business-related outcomes such as increased customer service or product quality, then results outcomes should be included in the evaluation. As **Figure 6.4** shows, both reaction and cognitive outcomes may affect learning. Reaction outcomes provide information regarding the extent to which the trainer, facilities, or learning environment may have hindered learning. Learning or cognitive outcomes directly measure the extent to which trainees have mastered training content. However, reaction and cognitive outcomes do not help determine how much trainees actually use the training content in their jobs. As much as possible, evaluation should include behavior or skill-based, affective, or results outcomes

FIGURE 6.4 **Training Program Objectives and Their Implications for Evaluation**



to determine the extent to which transfer of training has occurred—that is, whether training has influenced a change in behavior, skill, or attitude or has directly influenced objective measures related to company effectiveness (e.g., sales).

How long after training should outcomes be collected? There is no accepted standard for when the different training outcomes should be collected. In most cases, reactions are usually measured immediately after training.[39] Learning, behavior, and results should be measured after sufficient time has elapsed to determine whether training has had an influence on these outcomes. Positive transfer of training is demonstrated when learning occurs and positive changes in skill-based, affective, or results outcomes are also observed. No transfer of training is demonstrated if learning occurs but no changes are observed in skill-based, affective, or learning outcomes. Negative transfer is evident when learning occurs but skills, affective outcomes, or results are less than at pretraining levels. Results of evaluation studies that find no transfer or negative transfer suggest that the trainer and the manager need to investigate whether a good learning environment (e.g., opportunities for feedback and practice) was provided in the training program, whether trainees were motivated and able to learn,

Evaluation Designs

The design of the training evaluation determines the confidence that can be placed in the results, that is, how sure a company can be that training is either responsible for changes in evaluation outcomes or has failed to influence the outcomes. No evaluation design can ensure that the results of the evaluation are completely due to training. What the evaluator strives for is to use the most rigorous design possible (given the circumstances under which the evaluation occurs) to rule out alternative explanations for the results of the evaluation.

This discussion of evaluation designs begins by identifying these "alternative explanations" that the evaluator should attempt to control. Next, various evaluation designs are compared. Finally, this section discusses practical circumstances that the trainer needs to consider in selecting an evaluation design.

Threats to Validity: Alternative Explanations for Evaluation Results

Table 6.6 presents threats that can bring the validity of an evaluation into question. **Threats to validity** refer to factors that will lead an evaluator to question either (1) the believability of the study results or (2) the extent to which the evaluation results are generalizable to other groups of trainees and situations.[40] The believability of study results refers to **internal validity.** The internal threats to validity relate to characteristics of the company (history), the outcome measures (instrumentation, testing), and the persons in the evaluation study (maturation, regression toward the mean, mortality, initial group differences). These characteristics can cause the evaluator to reach the wrong conclusions about training effectiveness. An evaluation study needs internal validity to provide confidence that the results of the evaluation (particularly if they are positive) are due to the training program and not to another factor. For example, consider a group of managers who have attended a communication skills training program. At the same time that they attend the program, it is announced that the company will be restructured. After the program, the managers may become better communicators simply because they are scared that if they don't they will lose their jobs. Perhaps no learning actually occurred in the training program at all.

TABLE 6.6 Threats to Validity

Threats to Internal Validity	Description
Company	
History	Event occurs, producing changes in training outcomes.
Persons	
Maturation	Changes in training outcomes result from trainees' physical growth or emotional state.
Mortality	Study participants drop out of study (e.g., leave company).
Initial group differences	Training group differs from comparison group on individual differences that influence outcomes (knowledge, skills, ability, and behavior).
Outcome Measures	
Testing	Trainees are sensitized to perform well on post-test measures.
Instrumentation	Trainee interpretation of outcomes changes over course of evaluation.
Regression toward the mean	High- and low-scoring trainees move toward the middle or average on post-training measure.
Threats to External Validity	**Description**
Reaction to pretest	Use of a test before training causes trainees to pay attention to material on the test.
Reaction to evaluation	Being evaluated causes trainees to try harder in training program.
Interaction of selection and training	Characteristics of trainees influence program effectiveness.
Interaction of methods	Results of trainees who received different methods can be generalized only to trainees who receive same training in the same order.

Source: Based on T. D. Cook, D. T. Campbell, and L. Peracchio, "Quasi-Experimentation." In *Handbook of Industrial and Organizational Psychology*, 2nd ed., Vol. 1, eds. M. D. Dunnette and L. M. Hough (Palo Alto, CA: Consulting Psychologists Press, 1990), pp. 491–576.

Trainers are also interested in the generalizability of the study results to other groups and situations (i.e., they are interested in the **external validity** of the study). As shown in **Table 6.6,** threats to external validity relate to how study participants react to being included in the study and the effects of multiple types of training. Because evaluation usually does not involve all employees who have completed a program (or who may take training in the future), trainers want to be able to say that the training program will be effective in the future with similar groups.

Methods to Control for Threats to Validity

Because trainers often want to use evaluation study results as a basis for changing training programs or demonstrating that training does work (as a means to gain additional funding for training from those who control the training budget), it is important to minimize the threats to validity. There are three ways to minimize threats to validity: the use of pretests and post-tests in evaluation designs, the use of comparison groups, and random assignment.

Pretests and Post-Tests

One way to improve the internal validity of the study is to first establish a baseline (pretest) or **pretraining measure** of the outcome. Another measure of the outcomes can be taken after training. This is referred to as a **post-training measure.** A comparison of the post-training and pretraining measures can indicate the degree to which trainees have changed as a result of training.

Use of Comparison Groups

Internal validity can be improved by using a control or comparison group. A **comparison group** refers to a group of employees who participate in the evaluation study but do not attend the training program. The comparison employees have personal characteristics (e.g., gender, education, age, tenure, and skill level) as similar to the trainees as possible. Use of a comparison group in training evaluation helps rule out the possibility that changes found in the outcome measures are due to factors other than training. The **Hawthorne effect** refers to employees in an evaluation study performing at a high level simply because of the attention they are receiving. Use of a comparison group helps show that any effects observed are due specifically to the training rather than the attention the trainees are receiving. Use of a comparison group helps control the effects of history, testing, instrumentation, and maturation because both the comparison group and the training group are treated similarly, receive the same measures, and have the same amount of time to develop.

For example, consider an evaluation of a safety training program. Safe behaviors are measured before and after safety training for both trainees and a comparison group. If the level of safe behavior improves for the training group from pretraining levels but remains relatively the same for the comparison group at both pretraining and post-training, the reasonable conclusion is that the observed differences in safe behaviors are due to training and not due to some other factors, such as the attention given to both the trainees and the comparison group by asking them to participate in the study.

Keep in mind that a comparison group can be naturally available for training evaluation because all employees may not receive training at the same time or training may be attended by employees at one or several company locations but not at all locations. Employees who do not initially receive training can serve as a comparison group. These employees can be scheduled to receive training at a later time after the evaluation is completed.

Random Assignment

Random assignment refers to assigning employees to the training or comparison group on the basis of chance alone. That is, employees are assigned to the training program without consideration of individual differences (ability or motivation) or prior experiences. Random assignment helps ensure that trainees are similar in individual characteristics such as age, gender, ability, and motivation. Because it is often impossible to identify and measure all the individual characteristics that might influence the outcome measures, random assignment ensures that these characteristics are equally distributed in the comparison group and the training group. Random assignment helps reduce the effects of employees dropping out of the study (mortality) and differences between the training group and comparison group in ability, knowledge, skill, or other personal characteristics.

Keep in mind that random assignment is often impractical. Companies want to train employees who need training. Also, companies may be unwilling to provide a comparison group. One solution to this problem is to identify the factors in which the training and comparison groups differ and control for these factors in the analysis of the data (a statistical procedure known as *analysis of covariance*). Another method is to determine trainees' characteristics after they are assigned and ensure that the comparison group includes employees with similar characteristics.

Types of Evaluation Designs

A number of different designs can be used to evaluate training programs.[41] **Table 6.7** compares each design on the basis of who is involved (trainees or comparison group), when measures are collected (pre-test or pre-training, post-test or post-training), the costs, the time it takes to conduct the evaluation, and the strength of the design for ruling out alternative explanations for the results. As shown in **Table 6.7,** research designs vary based on whether they include pretraining and post-training measurement of outcomes and a comparison group. In general, designs that use pretraining and post-training measures of outcomes and include a comparison group reduce the risk that alternative factors (other than the training itself) are responsible for the results of the evaluation. This increases the trainer's confidence in using the results to make decisions. Of course, the trade-off is that evaluations using these designs are more costly and take more time to conduct than do evaluations not using pretraining and post-training measures or comparison groups.

Post-Test Only

The **post-test-only** design refers to an evaluation design in which only post-training outcomes are collected. This design can be strengthened by adding a comparison group (which helps rule out alternative explanations for changes). The post-test-only design is appropriate when trainees (and the comparison group or groups, if they are used) can be expected to have similar levels of knowledge, behavior, or results outcomes (e.g., same number of sales or equal awareness of how to close a sale) prior to training.

PwC was interested in determining the effectiveness of a diversity and inclusion class offered in three different instructional formats (in class, online, and using virtual reality [VR] technology).[42] The in-class format ran for two hours; facilitators used videos, reflection exercises, and discussion topics. For the online version, learners were afforded increased flexibility and could use their laptops to complete the 45-minute course at any time. Learners were guided through the same activities as the classroom version. The learners who used VR wore head-mounted displays. Instead of watching a video, the learner would be one of the team members participating in the discussion. Post-training measures supported the use of VR technology for training. VR learners were more confident in discussing issues of diversity and inclusion as well as in acting on what they had learned.

TABLE 6.7 Comparison of Evaluation Designs

		Measures				
Design	**Groups**	**Pretraining**	**Post-training**	**Cost**	**Time**	**Strength**
Post-test only	Trainees	No	Yes	Low	Low	Low
Pretest/post-test	Trainees	Yes	Yes	Low	Low	Medium
Post-test only with comparison group	Trainees and comparison	No	Yes	Medium	Medium	Medium
Pretest/post-test with comparison group	Trainees and comparison	Yes	Yes	Medium	Medium	High
Time series	Trainees	Yes	Yes, several	Medium	Medium	Medium
Time series with comparison group and reversal	Trainees and comparison	Yes	Yes, several	High	Medium	High
Solomon Four-Group	Trainees A	Yes	Yes	High	High	High
	Trainees B	No	Yes			
	Comparison A	Yes	Yes			
	Comparison B	No	Yes			

Pretest/Post-Test

The **pretest/post-test** design refers to an evaluation design in which both pretraining and post-training outcome measures are collected. There is no comparison group. The lack of a comparison group makes it difficult to rule out the effects of business conditions or other factors as explanations for changes. This design is often used by companies that want to evaluate a training program but are uncomfortable with excluding certain employees or that intend to train only a small group of employees.

At Edward Jones, the company's Insurance Partnership program brings together branch teams including one financial adviser, an office administrator, and insurance consultants.[43] The training, which lasts two days, trains the teams in how to design and present insurance solutions and identify clients who need insurance. An evaluation compared the pretraining and post-training results 15 months after training for over 500 branches. Evaluation results showed that after training, the branches placed on average one more insurance policy; the top 50 branches increased the average of permanent policies to eight; and insurance-related gross revenue increases resulted in more than a 600 percent return on investment.

Pretest/Post-Test with Comparison Group

The **pretest/post-test with comparison group** refers to an evaluation design that includes trainees and a comparison group. Pretraining and post-training outcome measures are collected from both groups. If improvement is greater for the training group than the comparison group, this finding provides evidence that training is responsible for the change. This type of design controls for most threats to validity.

Table 6.8 presents an example of a pretest/post-test comparison group design. This evaluation involved determining the relationship between three conditions or treatments and learning, satisfaction, and use of computer skills.[44] The three conditions or treatments (types of computer training) were behavior modeling, self-paced study, and lecture. A comparison group was also included in the study. Behavior modeling involved watching a video showing a model performing key behaviors necessary to complete a task. In this case, the task was procedures on the computer. (Behavior modeling is discussed in detail in **Chapter Seven,** "Traditional Training Methods.")

TABLE 6.8 Example of a Pretest/Post-Test Comparison Group Design

	Pretraining	Training	Post-Training Time 1	Post-Training Time 2
Lecture	Yes	Yes	Yes	Yes
Self-paced study	Yes	Yes	Yes	Yes
Behavior modeling	Yes	Yes	Yes	Yes
No training (Comparison)	Yes	No	Yes	Yes

Source: Based on S. J. Simon and J. M. Werner, "Computer Training through Behavior Modeling, Self-Paced, and Instructional Approaches: A Field Experiment," *Journal of Applied Psychology* 81 (1996), pp. 648–59.

Forty trainees were included in each condition. Measures of learning included a test consisting of 11 items designed to measure information that trainees needed to know to operate the computer system (e.g., "Does formatting destroy all data on the disk?"). Also, trainees' comprehension of computer procedures (procedural comprehension) was measured by presenting trainees with scenarios on the computer screens and asking them what would appear next on the screen. Use of computer skills (skill-based learning outcome) was measured by asking trainees to complete six computer tasks (e.g., changing directories). Satisfaction with the program (reaction) was measured by six items (e.g., "I would recommend this program to others").

As shown in **Table 6.8,** measures of learning and skills were collected from the trainees prior to attending the program (pretraining). Measures of learning and skills were also collected immediately after training (post-training time 1) and four weeks after training (post-training time 2). The satisfaction measure was collected immediately following training.

The post-training time 2 measures collected in this study help determine the occurrence of training transfer and retention of the information and skills. That is, immediately following training, trainees may have appeared to learn and acquire skills related to computer training. Collection of the post-training measures four weeks after training provides information about trainees' level of retention of the skills and knowledge.

Statistical procedures known as analysis of variance and analysis of covariance were used to test for differences between pretraining measures and post-training measures for each condition. Also, differences between each of the training conditions and the comparison group were analyzed. These procedures determine whether differences between the groups are large enough to conclude with a high degree of confidence that the differences were caused by training rather than by chance fluctuations in trainees' scores on the measures.

Time Series

Time series refers to an evaluation design in which training outcomes are collected at periodic intervals both before and after training. (In the other evaluation designs discussed here, training outcomes are collected only once after and maybe once before training.) The strength of this design can be improved by using **reversal**, which refers to a time period in which participants no longer receive the training intervention. A comparison group can also be used with a time series design. One advantage of the time series design is that it allows an analysis of the stability of training outcomes over time. Another advantage is that using both the reversal and comparison group helps rule out alternative explanations for the evaluation results. The time series design is frequently used to evaluate training programs that focus on improving readily observable outcomes (such as accident rates, productivity, and absenteeism) that vary over time. CHG Healthcare Services evaluates the effects of new-hire training by first establishing a performance baseline that includes measures of total billing, applications received, and interviews.[45] As new training courses are introduced, CHG can track their influence on new hires' performance using these measures.

Figure 6.5 shows a time series design that was used to evaluate a training program designed to improve the number of safe work behaviors in a food manufacturing plant.[46] This plant was experiencing an accident rate similar to that of the mining industry, the most dangerous work environment. Employees were engaging in unsafe behaviors, such as putting their hands into conveyors to unjam them (resulting in crushed limbs).

To improve safety, the company developed a training program that taught employees safe behaviors, provided them with incentives for safe behaviors, and encouraged them to monitor their own behavior. To evaluate the program, the design included a comparison group (the Makeup department) and a trained group (the Wrapping department). The Makeup department is responsible for measuring and mixing ingredients, preparing the dough, placing the dough in the oven and removing it when it is cooked, and packaging the finished product. The Wrapping department is responsible for bagging, sealing, and labeling the packages and stacking them on skids for shipping. Outcomes included observations of safe work behaviors. These observations were taken over a 25-week period.

The baseline shows the percentage of safe acts prior to introduction of the safety training program. Training directed at increasing the number of safe behaviors was introduced after approximately 5 weeks (20 observation sessions) in the Wrapping department and 10 weeks (50 observation sessions) in the Makeup department. Training was withdrawn from the Wrapping and Makeup departments after approximately 62 observation sessions. The withdrawal of training resulted in a reduction of the work incidents performed safely (to pretraining levels). As shown, the number of safe acts observed varied across the observation period for both groups. However, the number of safe behaviors increased after the training program was conducted

FIGURE 6.5 **Example of a Time Series Design**

Source: J. Komaki, K. D. Badwick, and L. R. Scott, "A Behavioral Approach to Occupational Safety: Pinpointing Safe Performance in a Food Manufacturing Plant," *Journal of Applied Psychology* 63 (1978), pp. 434–45. Copyright 1978 by the American Psychological Association.

for the trained group (Wrapping department). The level of safe acts remained stable across the observation period. (See the intervention period.) When the Makeup department received training (at 10 weeks, or after 50 observations), a similar increase in the percentage of safe behaviors was observed.

Solomon Four-Group

The **Solomon four-group** design combines the pretest/post-test comparison group and the post-test-only control group design. In the Solomon four-group design, a training group and a comparison group are measured on the outcomes both before and after training. Another training group and control group are measured only after training. This design controls for most threats to internal and external validity. However, it is not frequently used in training evaluation because of its complexity and the number of groups required.

An application of the Solomon four-group design is shown in **Table 6.9.** This design was used to compare the effects of training based on integrative learning (IL) with traditional (lecture-based) training of manufacturing resource planning. Manufacturing resource planning is a method for effectively planning, coordinating, and integrating the use of all resources of a manufacturing company.[47] The IL-based training differed from traditional training in several ways. IL-based training sessions began with a series of activities intended to create a relaxed, positive environment for learning. The students were asked what manufacturing resource planning meant to them, and attempts were made to reaffirm their beliefs and unite the trainees around a common understanding of manufacturing resource planning. Students presented training material and participated in group discussions, games, stories, and poetry related to the manufacturing processes.

TABLE 6.9 Example of a Solomon Four-Group Design

	Pretest	Training	Post-Test
Group 1	Yes	IL based	Yes
Group 2	Yes	Traditional	Yes
Group 3	No	IL based	Yes
Group 4	No	Traditional	Yes

Source: Based on R. D. Bretz and R. E. Thompsett, "Comparing Traditional and Integrative Learning Methods in Organizational Training Programs," *Journal of Applied Psychology* 77 (1992), pp. 941–51.

Because the company was interested in the effects of IL compared to traditional training, groups that received traditional training were used as the comparison groups (rather than groups who received no training). A test of manufacturing resource planning (knowledge test) and a reaction measure were used as outcomes. The study found that participants in the IL-based learning groups learned slightly less than participants in the traditional training groups. However, IL-group participants had much more positive reactions than did those in the traditional training groups.

Considerations in Choosing an Evaluation Design

There is no one appropriate evaluation design. An evaluation design should be chosen based on an evaluation of the factors shown in **Table 6.10.** There are several reasons why no evaluation or a less rigorous evaluation design may be more appropriate than a more rigorous design that includes a comparison group, random assignment, or pretraining and post-training measures. First, managers and trainers may be unwilling to devote the time and effort necessary to collect training outcomes. Second, managers or trainers may lack the expertise to conduct an evaluation study. Third, a company may view training as an investment from which it expects to receive little or no return.

TABLE 6.10 Factors That Influence the Type of Evaluation Design

Factors to Consider in Choosing an Evaluation Design
Can the training program be **changed**?
Is the training program **important**? That is, does ineffective training affect customer service, safety, product development, or relationships among employees?
What is the **scale** of the program? How many trainees are involved?
What is the **purpose** of the training? Learning, results, or both?
Is demonstrating results a norm or expectation of the **company culture**?
Is the **expertise** available to analyze a complex evaluation study?
What is the **cost** of conducting an evaluation?
What is the **time frame** for the evaluation?

Source: Based on S. I. Tannenbaum and S. B. Woods, "Determining a Strategy for Evaluating Training: Operating within Organizational Constraints," *Human Resource Planning* 15 (1992), pp. 63–81.

A more rigorous evaluation design (pretest/post-test with comparison group) should be considered if any of the following conditions is true:[48]

1. The evaluation results can be used to change the program.
2. The training program is ongoing and has the potential to have an important influence on employees or customers.
3. The training program involves multiple classes and a large number of trainees.
4. Cost justification for training is based on numerical indicators. (Here, the company has a strong orientation toward evaluation.)
5. Trainers or others in the company have the expertise (or the budget to purchase expertise from outside the company) to design and evaluate the data collected from an evaluation study.
6. The cost of the training creates a need to show that it works.
7. There is sufficient time for conducting an evaluation. (Here, information regarding training effectiveness is not needed immediately.)
8. There is interest in measuring change (in knowledge, behavior, skill, etc.) from pretraining levels or in comparing two or more different programs.

For example, if the company is interested in determining how much employees' communications skills have changed as a result of a training program, a pretest/post-test comparison group design is necessary. Trainees should be randomly assigned to training and no-training conditions. These evaluation design features offer a high degree of confidence that any communication skill change is the result of participation in the training program.[49] This type of evaluation design is also necessary if the company wants to compare the effectiveness of two training programs.

Evaluation designs without pretest or comparison groups are most appropriate in situations in which the company is interested in identifying whether a specific level of performance has been achieved (e.g., Are employees who participated in training able to communicate their ideas adequately?). In these situations, companies are not interested in determining how much change has occurred, but rather whether the trainees have achieved a certain proficiency level.

Sometimes naturally occurring comparison groups are available, which provides the opportunity to use the pretest and the post-test with comparison group or the post-test with comparison group evaluation designs. This can occur because of the realities of scheduling employees to attend training (all employees cannot attend training at the same time) or when new training is implemented. For example, some employees may be scheduled to receive training later than others. The employees who do not initially receive training can be considered the comparison group. Outcomes can be measured and comparisons made between the employee group that has received training and the employees who are waiting to receive the training. Associates in BB&T Corporation's leadership development program, the Leadership Excellence Program, receive coaching by a leadership consultant, attend workshops focused on different aspects of leadership, and work on a project that will benefit their area of business. BB&T conducted an evaluation study in which it compared associates who participated in the Leadership Excellence Program with their peers who had not yet participated in the program (comparison group). The evaluation study showed that the promotion rate for program participants was more than two times faster than for the comparison group. In addition, program participants had a 31 percent retention rate, which translated into saving $13 million in replacement costs.[50]

One company's evaluation strategy for a training course delivered to the company's tax professionals shows how company norms regarding evaluation and the purpose of training influence the type of evaluation design chosen.[51] This accounting firm views training as an effective method for developing human resources. Training is expected to provide a good return on investment. The company used a combination of affective, cognitive, behavior, and results criteria to evaluate a five-week course designed to prepare tax professionals to understand state and local tax law. The course involved two weeks of self-study and three weeks of classroom work. A pretest/post-test comparison design was used. Before they took the course, trainees were tested to determine their knowledge of state and local tax laws, and they completed a survey designed to assess their self-confidence in preparing accurate tax returns. The evaluators also identified the trainees' (accountants') billable hours related to calculating state and local tax returns and the revenue generated by the activity. After the course, evaluators again identified billable hours and surveyed trainees' self-confidence. The results of the evaluation indicated that the accountants were spending more time doing state and local tax work than before training. Also, the trained accountants produced more revenue doing state and local tax work than did accountants who had not yet received the training (comparison group). There was also a significant improvement in the accountants' confidence following training, and they were more willing to promote their expertise in state and local tax preparation. Finally, after 15 months, the revenue gained by the company more than offset the cost of training. On average, the increase in revenue for the trained tax accountants was more than 10 percent.

Determining Return on Investment

Return on investment (ROI) is an important training outcome. This section discusses how to calculate ROI through a cost-benefit analysis. **Cost-benefit analysis** in this situation is the process of determining the economic benefits of a training program using accounting methods that look at training costs and benefits. Training cost information is important for several reasons:[52]

1. To understand total expenditures for training, including direct and indirect costs.
2. To compare the costs of alternative training programs.
3. To evaluate the proportion of money spent on training development, administration, and evaluation, as well as to compare monies spent on training for different groups of employees (exempt versus nonexempt, for example).
4. To control costs.

There is an increased interest in measuring the ROI of training and development programs because of the need to show the results of these programs to justify funding and to increase the status of the training and development function.[53] Most trainers and managers believe that there is a value provided by training and development activities, such as productivity or customer service improvements, cost reductions, time savings, and decreased employee turnover. ROI provides evidence of the economic value provided by training and development programs. However, it is important to keep in mind that ROI is not a substitute for other program outcomes that provide data regarding the success of a program based on trainees' reactions and whether learning and transfer of training have occurred.

Typically, ROI is used to show a training program's cost effectiveness after it has been delivered. However, ROI is also useful for forecasting the potential value of a new training program, choosing the most cost-effective training method by estimating and comparing the costs and benefits of each approach, and making decisions about whether to fund and offer training programs in the future.[54]

Consider the use of ROI at LensCrafters. LensCrafters brings the eye doctor, a wide selection of frames and lenses, and the lens-making laboratory together in one location.[55] LensCrafters has convenient locations and hours of operations, and it has the ability to make eyewear on-site. Emphasizing customer service, the company offers a one-stop location and promises to make eyewear in one hour. Dave Palm, a training professional at LensCrafters, received a call from a concerned regional manager. He told Palm that although company executives knew that LensCrafters employees had to be well trained to design eyewear and that employees were satisfied with the training, the executives wanted to know whether the money that they were investing in training was providing any return. Palm decided to partner with the operations people to identify how to link training to measurable outcomes such as profitability, quality, and sales. After conversations with the operations employees, he decided to link training to waste from mistakes in quality and remakes, store performance and sales, and customer satisfaction. He chose two geographic regions for the evaluation study and compared the results from these two regions with results from one that had not yet received the training. Palm found that all stores in the two regions that received training reduced waste, increased sales, and improved customer satisfaction. As a result, LensCrafters allotted its training department more financial resources than any other optical retail competitor—$10 million a year for training program development and administration. And, because the training department demonstrated that it does contribute to business operations, it also received money to develop a multimedia-based training system.

The process of determining ROI begins with an understanding of the objectives of the training program.[56] Plans are developed for collecting data related to measuring these objectives. The next step is to isolate, if possible, the effects of training from other factors that might influence the data. Last, the data are converted to a monetary value and ROI is calculated. Choosing evaluation outcomes and designing an evaluation that helps isolate the effects of training were explained earlier in this chapter. The following sections discuss how to determine costs and benefits and provide examples of cost-benefit analysis and ROI calculations.

Because ROI analysis can be costly, it should be limited only to certain training programs. ROI analysis is best for training programs that are focused on an operational issue (measurable identifiable outcomes are available), are linked to a companywide strategy (e.g., better customer service), are expensive; are highly visible, have management interest, are attended by many employees, and are permanent.[57] At Deloitte, the tax and auditing firm, managers don't require analysis of ROI for many training programs.[58] Because knowledge is the product at Deloitte, investment in training is seen as an important part of the business. Deloitte makes money through the billable hours that its consultants provide to clients. Training helps prepare the consultants to serve clients' needs. ROI is primarily calculated for courses or programs that are new or expensive. For example, ROI analysis was conducted for a simulation designed to help new employees learn more quickly how to service clients. At Deloitte, use of the simulation has resulted in new hires being 30 to 40 percent faster in serving clients—resulting in an ROI of over $66 billion after subtracting program costs.

Determining Costs

One method for comparing costs of alternative training programs is the resource requirements model.[59] The resource requirements model compares equipment, facilities, personnel, and materials costs across different stages of the training process (needs assessment, development, training design, implementation, and evaluation). Use of the resource requirements model can help determine overall differences in costs among training programs. Also, costs incurred at different stages of the training process can be compared across programs.

Accounting can also be used to calculate costs.[60] Seven categories of cost sources are: costs related to program development or purchase, instructional materials for trainers and trainees, equipment and hardware, facilities, travel and lodging, the salary of the trainer and support staff, and the cost of lost productivity while trainees attend the program (or the cost of temporary employees who replace the trainees while they are away from their jobs). This method also identifies when the costs are incurred. One-time costs include those related to needs assessment and program development. Costs per offering relate to training site rental fees, trainer salaries, and other costs that are realized every time the program is offered. Costs per trainee include meals, materials, and lost productivity or expenses incurred to replace the trainees while they attend training. For example, consider the costs for virtual training compared to instructor-led training. Aetna has moved from face-to-face instructor-led classroom training to virtual training for its 16-week program for new customer service representatives.[61] The cost to bring a trainer to locations without one on-site was more than $27,000. The comparable costs for the same training program conducted virtually are approximately $3,000.

Determining Benefits

To identify the potential benefits of training, the company must review the original reasons that the training was conducted. For example, training may have been conducted to reduce production or overtime costs or to increase the amount of repeat business. A number of methods may be helpful in identifying the benefits of training:

1. Technical, academic, and practitioner literature summarizes the benefits that have been shown to relate to a specific training program.
2. Pilot training programs assess the benefits from a small group of trainees before a company commits more resources.
3. Observance of successful job performers helps a company determine what successful job performers do differently than unsuccessful job performers.[62]
4. Trainees and their managers provide estimates of training benefits.

For example, a training and development consultant at Apple Computer was concerned with the quality and consistency of the training program used in assembly operations.[63] She wanted to show that training was not only effective but also resulted in financial benefits. To do this, the consultant chose an evaluation design that involved two separately trained groups—each consisting of 27 employees—and two untrained groups (comparison groups). The consultant collected a pretraining history of what was happening on the production line in each outcome that she was measuring (i.e., productivity, quality, and labor efficiency). She determined the effectiveness of training by comparing performance between the comparison and training groups for two months after training. The consultant was able to show that the untrained comparison group had 2,000 more minutes of downtime than the trained group did. This finding meant that the trained employees built and shipped more products to customers—showing definitively that training was contributing to Apple's business objectives.

To conduct a cost-benefit analysis, the consultant had each employee in the training group estimate the effect of a behavior change on a specific business measure (e.g., breaking down tasks will improve productivity or efficiency). The trainees assigned a confidence percentage to the estimates. To get a cost-benefit estimate for each group of trainees, the consultant multiplied the monthly cost-benefit by the confidence level and divided by the number of trainees. For example, one group of 20 trainees estimated a total overall monthly cost-benefit of $336,000 related to business improvements and showed an average 70 percent confidence level with that estimate. The calculation is as follows: 70% × $336,000 = $235,200 cost-benefit. This number was divided by 20 ($235,200/20 trainees) to give an average estimated cost-benefit for each of the trainees ($11,760). To calculate ROI, follow these steps:[64]

1. Identify outcomes (e.g., quality, accidents).
2. Place a value on the outcomes.
3. Determine the change in performance after eliminating other potential influences on training results.
4. Obtain an annual amount of benefits (operational results) from training by comparing results after training to results before training (in dollars).
5. Determine the training costs (direct costs + indirect costs + development costs + overhead costs + compensation for trainees).
6. Calculate the total benefits by subtracting the training costs from benefits (operational results).
7. Calculate the ROI by dividing operational results by costs. The ROI gives an estimate of the dollar return expected from each dollar invested in training.

Example of a Cost-Benefit Analysis

A cost-benefit analysis is best explained by an example.[65] A wood plant produced panels that contractors used as building materials. The plant employed 300 workers, 48 supervisors, 7 shift superintendents, and a plant manager. The business had three problems. First, 2 percent of the wood panels produced each day were rejected because of poor quality. Second, the production area was experiencing poor housekeeping, such as improperly stacked finished panels that would fall on employees. Third, the number of preventable accidents was higher than the industry average. To correct these problems, the supervisors, shift superintendents, and plant manager attended training in (1) performance management and interpersonal skills related to quality problems and poor work habits of employees, and (2) how to reward employees for performance improvement. Training was conducted in a hotel close to the plant. The training program was a purchased videotape, and the instructor for the program was a consultant. **Table 6.11** shows each type of cost and how it was determined.

TABLE 6.11 Determining Costs for a Cost-Benefit Analysis

Direct Costs	
Instructor	$ 0
In-house instructor (12 days @ $125 per day)	1,500
Fringe benefits (25% of salary)	375
Travel expenses	0
Materials ($60 × 56 trainees)	3,360
Classroom space and audiovisual equipment (12 days @ $50 per day)	600

Refreshments ($4 per day × 3 days × 56 trainees)	672
Total direct costs	**$ 6,507**
Indirect Costs	
Training management	$ 0
Clerical and administrative salaries	750
Fringe benefits (25% of salary)	187
Postage, shipping, and telephone	0
Pre- and post-training learning materials ($4 × 56 trainees)	224
Total indirect costs	**$ 1,161**
Development Costs	
Fee for program purchase	$ 3,600
Instructor training	
Registration fee	1,400
Travel and lodging	975
Salary	625
Benefits (25% of salary)	156
Total development costs	**$ 6,756**
Overhead Costs	
General organizational support, top management time (10% of direct, indirect, and development costs)	1,443
Total overhead costs	**$ 1,443**
Compensation for Trainees	
Trainees' salaries and benefits (based on time away from job)	$ 16,969
Total training costs	$32,836
Cost per trainee	**$ 587**

The benefits of the training were identified by considering the objectives of the training program and the type of outcomes the program was to influence. These outcomes included the quality of panels, housekeeping in the production area, and the accident rate. **Table 6.12** shows how the benefits of the program were calculated.

Once the costs and benefits of the program are determined, ROI is calculated by dividing return or benefits by costs. In this example, ROI was 5.72. That is, every dollar invested in the program returned almost $6 in benefits. How can the company determine if the ROI is acceptable? One way is for managers and trainers to agree on what level of ROI is acceptable. Another method is to use the ROI that other companies obtain from similar types of training. **Table 6.13** provides examples of ROIs obtained from several types of training programs.

Verizon Communications compared two groups of customer service representatives: representatives in the first group (the training group) had the opportunity to watch customer service scenarios, practice and record their responses, and receive feedback (the training group); representatives in the second group (the

TABLE 6.12 **Determining Benefits for a Cost-Benefit Analysis**

Operational Results Area	How Measured	Results Before Training	Results After Training	Differences (+ or −)	Costs
Quality of panels	Percentage rejected	2% rejected—1,440 panels per day	1.5% rejected—1,080 panels per day	0.5%—360 panels	\$720 per day; \$172,800 per year
Housekeeping	Visual inspection using 20-item checklist	10 defects (average)	2 defects (average)	8 defects	Not measurable in dollars
Preventable accidents	Number of accidents	24 per year	16 per year	8 per year	\$48,000 per year
	Direct cost of accidents	\$144,000 per year	\$96,000 per year	\$48,000 per year	
	$\text{ROI} = \dfrac{\text{Return}}{\text{Investment}} = \dfrac{\text{Benefits}-\text{Costs}}{\text{Costs}} = \dfrac{220{,}800 - 32{,}836}{32{,}836} = 5.72$				
				Total benefits = \$187,964	

Source: D. G. Robinson and J. Robinson, "Training for Impact," *Training and Development Journal* (August 1989), pp. 30–42.

TABLE 6.13 **Examples of ROIs**

Industry	Training Program	ROI
Bottling company	Workshops on managers' roles	15:1
Large commercial bank	Sales training	21:1
Electric and gas utility	Behavior modification	5:1
Oil company	Customer service	4.8:1
Health maintenance organization	Team training	13.7:1
Health medical services	Coaching for leaders	2:1

Sources: Based on "Top 125 Rankings 2015," *training* (January/February 2015), pp. 62–101; J. J. Philips, "ROI: The Search for Best Practices," *T+D* (February 1996), p. 45.

comparison group) watched the videos but did not practice.[66] The training group had a 71 percent increase in acquiring new customers compared to the comparison group. To calculate the ROI, Verizon considered development costs; compensation costs; and costs for materials, instructors, and coaches. It found that the training resulted in a \$1.4 million increase in revenue over three months.

Other Methods for Cost-Benefit Analysis

Other more sophisticated methods are available for determining the dollar value of training. For example, **utility analysis** is a cost-benefit analysis method that involves assessing the dollar value of training based on estimates of the difference in job performance between trained and untrained employees, the number of individuals trained, the length of time a training program is expected to influence performance, and the variability in job performance in the untrained group of employees.[67] Utility analysis requires the use of a pretest/post-test design with a comparison group to obtain an estimate of the difference in job performance for trained versus untrained employees. Other types of economic analyses evaluate training as it benefits the firm or the government using direct and indirect training costs, government incentives paid for training, wage increases received by trainees as a result of completion of training, tax rates, and discount rates.[68]

Practical Considerations in Determining ROI

As mentioned earlier in the chapter, ROI analysis may not be appropriate for all training programs. Training programs best suited for ROI analysis have clearly identified outcomes, are not one-time events, are highly visible in the company, are strategically focused, and have effects that can be isolated. In the examples of ROI analysis in this chapter, the outcomes were very measurable. That is, in the wood plant example, it was easy to see changes in quality, to count accident rates, and to observe housekeeping behavior. For training programs that focus on soft outcomes (e.g., attitudes or interpersonal skills), it may be more difficult to estimate the value.

Showing the link between training and market share gain or other higher-level strategic business outcomes can be very problematic. These outcomes can be influenced by too many other factors not directly related to training (or even under the control of the business), such as competitors' performance and economic upswings and downturns. Business units may not be collecting the data needed to identify the ROI of training programs on individual performance. Also, the measurement of training can often be very expensive. Verizon Communications employs over 200,000 people.[69] The company estimates that it spends approximately $5,000 for an ROI study. Given the large number of training programs that the company offers, it is too expensive to conduct an ROI for each program.

Companies are finding that, despite these difficulties, the demand for measuring ROI is still high. As a result,, companies are using creative ways to measure the costs and benefits of training.[70] For example, to calculate ROI for a training program designed to cut absenteeism, trainees and their supervisors were asked to estimate the cost of an absence. The values were averaged to obtain an estimate. Cisco Systems tracks how often its partners return to its website for additional instruction. A.T. Kearney, a management consulting firm, tracks the success of its training by how much business is generated from past clients.

Success Cases and Return on Expectations

One way to establish the value of training and overcome the difficulty of evaluating training using a design that can rule out and isolate its effects on results is to rely on return on expectations or success cases. **Return on expectations (ROE)** refers to the process through which evaluation demonstrates to key business stakeholders, such as top-level managers, that their expectations about training have been satisfied.[71] ROE depends on establishing a business partnership with business stakeholders from the start of a training program through its evaluation.

Verizon Communications conducts ROI analysis for training programs and courses in which objective numbers are available (e.g., sales training) and in which the influence of training can be better isolated (evaluation designs that have comparison groups and that collect pretraining and post-training outcomes). But for other programs, Verizon Communications uses training ROE. Prior to training, the senior managers who are financially accountable for the training program are asked to identify their expectations regarding what the training program should accomplish, as well as provide a cost estimate of the current issue or problem. After training, the senior managers are asked whether their expectations have been met, and they are encouraged to attach a monetary value to those met expectations.

Success cases or stories refer to concrete examples of the impact of training that show how learning has led to results that the company finds worthwhile and the managers find credible.[72] Success cases do not attempt to isolate the influence of training, but rather they provide evidence that it was useful. Comcast's training and development team holds sessions throughout the year during which individuals volunteer to discuss the learning programs they implemented and their results, such as increasing an employee's proficiency in a certain skill or growing sales revenue.[73] These stories are part of the company's culture and help show the strategic value of the training function.

Measuring Human Capital and Training Activity

So far, this chapter has focused on how to evaluate training programs. It is important to remember that evaluation can also involve determining the extent to which learning and training activities and the training function contribute to the company strategy and help achieve business goals. **Chapter One** emphasized the increased recognition that training, development, and learning can and should contribute to employee performance and business goals (see **Figure 1.1**). We discussed the role of metrics in the strategic training and development process in **Chapter Two.** Metrics are used to determine the value that learning activities or the training function provide to the company.

Table 6.14 provides examples of different measurements or metrics. These metrics are valuable for benchmarking purposes, for understanding the current amount of training activity in a company, and for tracking historical trends in training activity. However, collecting these metrics does not address issues such as whether training is effective, or whether the company is using the data to make strategic training decisions.[74]

TABLE 6.14 Training Metrics

- Expenditure per employee
- Learning hours received per employee
- Expenditure as a percentage of payroll
- Expenditure as a percentage of revenue
- Cost per learning hour received
- Percentage of expenditures for external services
- Learning hours received per training and development staff member
- Average percentage of learning activities outsourced
- Average percentage of learning content by content area (e.g., basic skills, customer service, executive development)
- Average percentage of learning hours provided via different delivery methods (instructor-led, technology-based, etc.)
- Hours spent in training related to reskilling or upskilling
- Expenditure on reskilling or upskilling per employee

Sources: Based on D. Vance, "Latest Thinking on Measurement, Analytics, & Reporting," *Chief Learning Officer* (April 2020), pp. 41–44, 65; L. Arthur, J. Lynch, C. Robinson, K. Sullivan, M. Bujno, T. Tays, J. Flynn, and E. Sim, "#DeloitteNow: Human Capital Measures Up," Deloitte (November 3, 2020) from https://dart.deloitte.com/USDART/home/publications/deloitte/heads-up/2020/human-capital-measures-up, accessed January 21, 2021; D. Bushee, "Analyze This," *T+D* (March 2017), pp. 28–29; M. Ho, *2020 State of the Industry* (Alexandria, VA: Association for Talent Development, December 2020); T. Wilk, "How to Run Learning Like a Business," *Chief Learning Officer* (June 2014), pp. 48–60.

It is important to note that human capital metrics, including those related to training, development, and learning, are increasingly being recognized as important indicators of company effectiveness. For example, the International Organization for Standardization (ISO) published the first-ever "Human Capital Reporting Standards." These standards recommend that all organizations need to publicly report 10 human capital measures including the percentage of employees who have completed training on compliance and ethics and development and training costs.[75] Also, the U.S. Security and Exchange Commission (SEC) announced new rules governing disclosure about human capital for publicly traded companies.[76] The rule does not specifically define what metrics a company needs to disclose, but metrics such as those shown in **Table 6.14** would certainly be applicable.

Consider how Valvoline Instant Oil Change uses metrics.[77] Valvoline Instant Oil Change's training cannot possibly cover all of the issues a technician may encounter in trying to service every different vehicle make, model, and year. Processes for changing a drive belt or finding where the air filter is located in a vehicle often are quite different for each vehicle. To solve this problem, the company encourages managers to take videos with their cell phones that show the best way to deal with difficult service issues. The managers upload the videos to the company's learning system. Technicians can then view the videos when they encounter a service issue they are unfamiliar with. Valvoline's training and development team tracks video use by collecting data about how frequently the videos are viewed and what parts of the videos technicians tend to view. This allows them to edit or create new videos to address specific technician needs. For frequently viewed videos, the training team determines if training on the topic covered in the video should be added to the training courses technicians need to complete. Or, if the topic is already covered in training, more time should be spent on it.

Big Data and Workforce Analytics

Big data refers to complex data sets developed by compiling data across different organizational systems, including marketing and sales, human resources, finance, accounting, customer service, and operations. Three dimensions characterize big data: volume, variety, and velocity.[78] Volume refers to the large amount of available data. Variety includes the large number of sources and types of data that are available. Velocity refers to the huge amount of data that is being generated and the speed with which it must be evaluated, captured, and made useful. Big data can come from many different sources, including transactions, business applications, e-mails, social media, smartphones, and even sensors embedded in employees' identification badges or company products.

The goal of big data is to make decisions about human capital based on data rather than intuition or conventional wisdom, which likely lead to incorrect conclusions and recommendations. Big data can be used for many purposes, including to evaluate the effectiveness of learning and development programs, to determine their impact on business results, and to develop predictive models that can be used for forecasting training needs, course enrollments, costs, and outcomes. For example, big data can help predict when employees will take training in their careers and how that relates to their retention and promotion. Including learning-related data as part of big data can help show the strategic value of learning for a company. Using big data requires the use of workforce analytics. **Workforce analytics** refers to the practice of using quantitative methods and scientific methods to analyze data from human resource databases, corporate financial statements, employee surveys, and other data sources to make evidence-based decisions and show that human resource practices (including training, development, and learning) influence important company metrics.[79]

Despite the importance of the use of big data in learning, survey results show that only 43 percent of organizations use it in training evaluation.[80] This is attributed to the lack of skills needed to analyze big data and communicate the results.

Some companies are using dashboards to help measure the effectiveness, financial benefits, and relationship of learning activities to business strategy and goals. A **dashboard** refers to a computer interface designed to receive and analyze the data from departments within the company to provide information to managers and other decision makers.[81] Dashboards can draw their data from different sources, such as the company's human resource information system or learning management or course enrollment system. Dashboards are useful because they can provide a visual display using charts of the relationship between learning activities and business performance data, including measures related to intangible assets such as human capital (recall the discussion of human capital in **Chapter One**). The dashboard allows the user to access and use the data in different ways, including isolating problem areas and creating categories based on precalculated formulas (such as cost per learning hour received). Elevations Credit Union has to deal with compliance and risk mitigation requirements that change as the result of new technology or regulations.[82] On a daily basis, the company's training specialists monitor company wide data dashboards to identify performance trends and monitor sensitive financial data and transactions. The dashboard has helped the learning and development team identify trainee needs and develop training interventions before a serious problem occurs. This has led to a reduction of 48 percent of errors made in the company's branches.

Summary

Evaluation provides information used to determine training effectiveness. Evaluation involves identifying the appropriate outcomes to measure. The chapter notes that a good evaluation requires thinking about evaluation before conducting training. Information from the needs assessment and specific and measurable learning objectives help identify outcomes that should be included in the evaluation design. The outcomes used in evaluating training programs include trainees' satisfaction with the training program; learning of knowledge or skills; use of knowledge and skills on the job; and results such as sales, productivity, or accident prevention. Evaluation may also involve comparing the costs of training to the benefits received (ROI). Outcomes used in training evaluation help determine the degree to which the program has resulted in both learning and transfer of training. Evaluation also involves choosing the appropriate design to maximize the confidence that can be placed in the results. The design is based on a careful analysis of how to minimize threats to internal and external validity, as well as the purpose, expertise, and other company and training characteristics. The types of designs used for evaluation vary on the basis of whether they include pretraining and post-training measures of outcomes and use of a training group and a comparison group. The chapter concludes with a discussion of measuring human capital and training activity including introducing training metrics and how to use big data; workforce analytics; and dashboards to measure, analyze, and display the contribution of training to a company's human capital assets.

Key Terms

training effectiveness *244*
training outcomes *244*
criteria *244*
training evaluation *244*
evaluation design *244*
formative evaluation *245*
pilot testing *246*
summative evaluation *246*
impact mapping *247*
reaction outcomes *249*
Net Promoter Score (NPS) *250*
cognitive outcomes *251*
self-assessment *251*
skill-based outcomes *251*
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direct costs *254*
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dashboard *276*

Discussion Questions

1. What can be done to motivate companies to evaluate training programs?
2. What do threats to validity have to do with training evaluation? Identify internal and external threats to validity. Are internal and external threats similar? Explain.
3. What are the strengths and weaknesses of each of the following designs: post-test only, pretest/post-test with comparison group, and pretest/post-test only?
4. What is a Net Promoter Score? Explain its usefulness in training evaluation.
5. What are results outcomes? Why do you think most organizations don't use results outcomes to evaluate their training programs?
6. This chapter discussed several factors that influence the choice of evaluation design. Which of these factors would have the greatest influence on your choice of an evaluation design? Which would have the least influence? Explain your choices.
7. How might you estimate the benefits of a training program designed to teach employees how to use the Internet to monitor stock prices?
8. A group of managers ($N = 25$) participated in the problem-solving module of a leadership development program two weeks ago. The module consisted of two days in which the group focused on the correct process to use in problem solving. Each manager supervises 15–20 employees. The company is willing to change the program, and there is an increasing emphasis in the company to show that training expenses are justifiable. You are asked to evaluate this program. Your boss would like the results of the evaluation no later than six weeks from now. Discuss the outcomes you would collect and the design you would use. How might your answer change if the managers had not yet attended the program?
9. What practical considerations need to be taken into account when calculating a training program's ROI?
10. What is return on expectations (ROE)? How can it be used to show the costs and benefits of training without collecting statistics and conducting analyses? Explain its strengths and weaknesses compared to a cost-benefit analysis.
11. What are the characteristics of big data? Explain how big data could be used to show that learning influences business outcomes.

Application Assignments

1. Consider this course as a training program. In teams of up to five students, identify (a) the types of outcomes you would recommend to use in evaluating this course and (b) the evaluation design you would use. Justify your choice of a design based on minimizing threats to validity and practical considerations.
2. Domino's Pizza was interested in determining whether a new employee could learn how to make a pizza using online training. The online training includes video that shows the proper procedure for "massaging" a dough ball and stretching it to fit a 12-inch pizza pan. It also reviews Domino's quality standards that emphasize the roundness of the pizza, an even border, and uniform thickness of the dough. Traditionally, on-the-job training is used to teach new employees how to stretch pizza dough to fit the pizza pan.
   a. What outcomes or criteria should Domino's Pizza measure to determine if online training is an effective method for teaching new employees how to stretch pizza dough to fit a 12-inch pan? Who would be involved in the evaluation?
   b. Describe the evaluation design that you would recommend to determine if online training is more effective than on-the-job training.
3. Ask your instructor for a copy of the evaluation form, survey, or rating sheet that is used by your college, university, or business to evaluate the course or program in which you are using this text. As you look over the evaluation, answer the following questions:
   a. What are the strengths and weaknesses of the evaluation form?
   b. What changes would you suggest to improve the evaluation form (e.g., different questions, additional questions)?
   c. How should the evaluation be used to actually improve the instruction that you receive?
4. Sears designed a training program to improve tool and hardware sales. The two-hour program involved distance learning and was broadcast from the Sears training facility to 50 salespersons at 10 store locations in the United States. The salespersons are paid $15 per hour. The program involved training salespeople in how to set up merchandise displays so they attract buyers' attention. Sales of tools and merchandise at the 10 store locations included in the program averaged $5,000 per week before the program and $6,500 per week after the program. Program costs included:

Instructor	$ 6, 000
Distance learning (satellite space rental)	5,000
Materials ($100 per trainee @ 50 trainees)	5,000
Trainees' salaries and benefits (50 trainees with wages of $15 per hour in a 2-hour training program)	1,500

   What is the ROI of this program?
5. The chapter opener described Verizon's virtual reality (VR) and augmented reality (AR) training programs and the evaluation outcomes they used to help determine if these programs were effective. Reread the chapter opener.

a. Were the evaluation outcomes Verizon used reaction, learning, behavior, results, or return-on-investment outcomes? Explain your choice.
b. Choose either the VR or AR program. What other outcomes should be collected to increase your confidence that the program was effective? Explain your choice of outcomes.

6. Cablevision developed an e-learning course that taught salespersons how to increase the number of cable television subscribers, thereby increasing revenue. The company wants to know if salespersons will increase upselling of cable television services (e.g., premium channels) and will try to sell other products (e.g., e-mail and web access). The company also wants to know the ROI of this training program.
   a. What training outcomes should the company collect? From whom should the outcomes be collected?
   b. What evaluation design would you recommend? Defend your recommendation.
   c. Show how Cablevision can conduct an ROI analysis. Describe the information that the company should collect and how it should be collected.
7. The 100-employee information technology department of a financial services company had a high turnover rate. A survey of employees revealed that the reason that most of them left was dissatisfaction with the level of training. The average turnover rate was 23 percent per year. The cost to recruit and train one new employee was $56,625. To address the turnover problem, the company developed a skills training program that averaged 80 hours per year per employee. The average employee wage was $35 per hour. Instructor, classroom, and other costs were $170,000.
   a. What is the total cost of training? The total cost of turnover?
   b. If the turnover rate dropped 8 percent (from 23 percent to 15 percent), what would be the financial benefit of the training program?
   c. What is the ROI of the skills training program?
   d. How much would the turnover rate have to be reduced (from 23 percent) for the training program to show a benefit?
8. Go to www.roiinstitute.net, the website for ROI Institute, Inc., the leading resource on research, training, and networking for practitioners of the Phillips ROI Methodology™. Under the tab "Academy," click on "Free Tools." Under "Case Studies," review "Global Car Rental." What are the strengths of the approach described in this case for determining ROI? What are the weaknesses?
9. Watch the video about how Skillsoft and IBM are using big data at www.youtube.com/watch?v=Texn4x paZ0w. How is using big data to analyze employees' learning usage patterns useful for companies? For employees?
10. At the completion of a simulation, trainees were asked to provide their ratings to the following question: "How likely is it that you would recommend to a peer that they participate in the simulation?" A 0- to 10-point scale was provided for the trainees to make their ratings (0 = Highly Unlikely to Recommend; 10 = Highly Likely to Recommend). Groups of five trainees completed the simulation at one time. A total of 80 trainees completed the simulation. Their ratings were distributed as follows:

    10 trainees provided a rating of 0, 1, 2, 3, 4, 5, or 6

    20 trainees provided a rating of 7 or 8

    50 trainees provided a rating of 9 or 10

a. Calculate the Net Promoter Score (NPS) for the simulation.
b. What does the NPS indicate about trainees' satisfaction with the simulation? That is, interpret the NPS.
c. Discuss how you could use the NPS and the ratings to improve the simulation.

11. Watch the video of IFC Supervisory Skills Training Evaluation in Cambodia's Garment Industry at www.youtube.com/watch?v=Uncz_l_zJ6M. Was it important to evaluate this training program? Why? What types of learning outcomes were collected? What type of evaluation design was used to evaluate the training program? Were they able to use a comparison group? Explain how.

Case: *Training Relationship Managers at KCB Group*

The KCB Group, headquartered in Nairobi, Kenya, has 359 bank branches located in Uganda, Tanzania, Rwanda, Burundi, Ethiopia, and South Sudan. In the last three years, the number of in-person transactions made at the bank branches decreased from 36 percent to 12 percent as more customers relied on online banking tools. The company decided it was necessary to train branch staff who served as relationship managers so that they were better prepared for digital banking. Staff needed to better understand their customers so they could identify banking solutions that would meet their needs. The talent development team designed and launched the Universal Relationship Manager Program. The program's focus was on improving the following: Understanding of the variety of products and services offered by KCB, data analysis skills and the ability to connect independent pieces of information, communication skills, and increased business knowledge to help predict customers' future needs based on past transactions and interactions. The training program took place online and in person at each branch.

What outcomes should KCB Group collect to determine the effectiveness of the new training program? What evaluation design should it use? Explain your choice of outcomes and design.

Sources: Based on S. Castellano, "Preparing for the New World of Banking," *T+D* (2020 Best Practices), pp. 19–20; "KCB at a Glance" from www. kcbgroup.com, accessed January 21, 2021.

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Case 2 Learning in Practice

Learning Online at PepsiCo

PepsiCo, the food and beverage company, is teaching Six Sigma to all employees. Six Sigma is a quality control method providing practices and tools for process improvement. Prior to the coronavirus pandemic of 2020, PepsiCo conducted Six Sigma training in face-to-face classes. A key part of the face-to-face Six Sigma training were sessions that used building blocks to simulate real-life situational challenges. When COVID-19 forced employees to work remotely, the training needed to be converted to an online program. The online training included PowerPoint slides, discussions, and quizzes to measure knowledge retention. But trainees found the online training boring and did not engage with them in the same way as the face-to-face classes. The rate of trainees' satisfaction with the course dropped 25 percent and the failure rate for the quizzes was too high. What was missing was the opportunity for trainees to practice using the Six Sigma tools and techniques in real situations.

Marco Rodriguez Tapia, who was responsible for the Six Sigma training in PepsiCo's European locations, was looking for ways to improve the online program. He shared with his son his frustration at being unable to find training that had high level of realism and involved the learners. Tapia and his son often spent time playing the video game Minecraft. His son suggested that they should consider using Minecraft to simulate a factory floor so the trainees could practice what they were learning. Minecraft lets players create three-dimensional worlds where they can solve challenges, go on adventures, and interact with monsters. It can be adapted to create any type of environment or experience. In two days, his son Alexander made a prototype of a simulated PepsiCo plant where trainees could practice problem-solving and complete productivity challenges while building simulated pallets using virtual LEGO-style bricks. In the game, trainees face challenges and compete against other teams who are trying to build their pallets faster and with fewer errors.

PepsiCo's training team reviewed the prototype and encouraged father and son to take it to a Minecraft custom developer to translate all of the activities used in the in-person class into the game. PepsiCo's training team and other experts reviewed the final version of the new Six Sigma course making sure every tested every aspect was consistent, user-friendly, and appropriate to teach Six Sigma's key concepts. They tested the game for "bugs" to make sure it worked. The game was also translated into seven languages to meet the needs of PepsiCo's global workforce.

Although many trainees may actively play Minecraft so they are familiar with how the game works, many were not. The designers created a pre-training area where trainees could get comfortable with how to play the game before entering the simulation of the factory floor. Those familiar with the game can walk through the pre-training area directly into the simulation. The game is based on an imaginary distribution company that produces pallets of different products. The company needs to ship the pallets to a warehouse, which sends them to customers based on their orders. Inefficiencies in the process create waste and reduce profitability, but trainees can apply the Six Sigma training to fix these problems. Teams of trainees collect different colored blocks and arrange them in order on a pallet according to a set of instructions. The teams have to collaborate to assign functions, check their work, and identify ways to improve the process. As they progress, the challenges get more complicated through introducing missing parts and blocks scattered around the factory floor. This means trainees have to use more advanced problem-solving techniques to successfully complete each challenge. After the game is complete (it takes 45 minutes), teams virtually debrief and discuss what they learned and strategies they could use to improve. Results of new game-based approach were positive. Both trainees' satisfaction and passing rates on the quizzes were better than for the original online version of the Six Sigma training.

Questions

1. What instructional features or learning concepts did the game-based Six Sigma training include that were responsible for its positive results? Identify the aspect included in the game and explain its relationship to the instructional feature.
2. What additional outcomes should PepsiCo collect to further understand the effectiveness of the game-based training program? Identify the outcomes and explain why they should collect it.
3. Did PepsiCo conduct a formative evaluation of the new Six Sigma training? If so, what did they do and why was it important? If not, explain why they should conduct this type of evaluation.
4. What are the potential disadvantages of using a game-based simulation in training? List and explain the reason for each disadvantage you provide. What features of the leadership development program are most responsible for its positive results? Identify the features and explain why they are responsible.

Sources: Based on "Boosting PepsiCo's Productivity With.....Minecraft?" PepsiCo (December 15, 2020), from pepsico.com/news, accessed February 28, 2021; S. Gale, "Case Study: PepsiCo Leverage Minecraft for Lean Six Sigma Training," *Chief Learning Officer* (February 16, 2021), from chieflearningofficer.com, accessed February 23, 2021; R. Golden, "PepsiCo Turns to Minecraft, Moving Virtual Training Away from 'Zoom Fatigue,'" *HR Dive* (January 21, 2021), from hrdive.com/news, accessed February 28, 2021.

PART THREE

Training and Development Methods

Part Three of this book covers the different types of training and development methods. **Chapter Seven**, "Traditional Training Methods," introduces you to presentational, hands-on, and group training methods, which include on-the-job training (OJT), simulations and games, lectures, and various group building methods such as action learning and team training. **Chapter Eight**, "Technology-Based Training Methods," covers the newest technology-based methods that are being used for training and development. E-learning, online learning, distance learning, Massive Open Online Courses, virtual reality, augmented reality, artificial intelligence, collaboration tools such as blogs and wikis, and mobile learning using social media, smartphones, and tablet computers such as iPads are examples of some of the methods discussed. Blended learning is also covered. **Chapters Seven** and **Eight** both show how each method is used and discuss the potential strengths and weaknesses of each alternative, as well as important research results. Many companies are moving toward a blended learning approach to take advantage of the strengths of both face-to-face and technology-aided instruction.

Chapter Nine, "Employee Development and Career Management," details development planning and different types of development activities, including assessment, formal courses and programs, experiences, and interpersonal relationships involving mentoring and coaching. **Chapter Nine** also provides you with examples of companies' development systems.

Part Three concludes with the case, "Building a Workforce at Huntington Ingalls Industries," which discusses the different training methods the company is using to prepare employees to work in shipbuilding.

CHAPTER SEVEN

Traditional Training Methods

Objectives

After reading this chapter, you should be able to

7-1 Discuss the strengths and weaknesses of presentational, hands-on, and group building training methods.
7-2 Provide recommendations for effective on-the-job training (OJT).
7-3 Develop a case study.
7-4 Develop a self-directed learning module.
7-5 Discuss the key components of behavior modeling training.
7-6 Explain the conditions necessary for adventure learning to be effective.
7-7 Discuss what team training should focus on to improve team performance.

Training Drives Growth at Zeigler Auto Group

In 2004, the Zeigler Auto Group consisted of four dealerships and a president, Aaron Zeigler, with a desire to expand. Along with aggressive hiring, Zeigler's plan would require a training program to build skills and alignment with the company's values. A training program helps attract ambitious salespeople because recruiters can show that it will help them develop their selling skills and perhaps move into management. Furthermore, the largest dealership networks have formal training programs, and Zeigler wanted to compete for talent with them. Training has helped the company meet its president's ambition to expand. Zeigler Automotive Group is one of the largest privately owned dealer groups in the nation with 75 franchises and 30 locations in Illinois, Indiana, and Michigan. Zeigler has a workforce that includes hundreds of salespeople and service advisers.

The company developed training that combines classroom instruction with videos. The videos are available for salespeople, service advisers, and department managers. There are more than 2,000 videos in an online library. The videos range in length from 30 seconds to between 5 and 8 minutes. The library also includes training videos that have been developed by Zeigler's executives and managers. The videos cover essentials such as having a positive attitude at work and how to treat a customer as well as more complex topics such as overcoming a customer's objection to purchasing a car. After watching the videos, the employees take a quiz to check their understanding. Video instruction is used because the format is flexible and allows employees to learn as their schedule permits. When they meet for classroom training, which happens every month or two, they drill down deeper into topics. The classroom training involves either face-to-face sales training or a guest speaker at headquarters, with the presentation shared in other locations via videoconferencing. Guest speakers have included Jim Culhane, former NHL player and coach, and Lawrence Plaisier, long-time former educator and school administrator. The guest speakers' presentations are also videotaped, if they agree, and included in the video library. Training for new hires also involves face-to-face classroom instruction. Zeigler also uses mentoring groups to develop employees evaluated to have the potential to become managers. Participation in the mentoring groups is by membership only. The invitation comes from Zeigler based on a general manager's recommendation. The mentoring groups meet six to eight times a year at the company headquarters to discuss and analyze more complex parts of a manager's job that are not addressed in the training sessions.

Zeigler Auto Group also operates Elevate Leadership and Team Building Academy, which is part of Zeigler Motorsports. Zeigler Motorsports also includes three test tracks and four miles of trails. Elevate offers the same professional team building and leadership training services to other companies that Zeigler uses with its own employees. Three different training seminars are offered. The first seminar focuses on the elements needed to build a company culture that promotes employee engagement. The second seminar is designed to increase the level of cooperation between each employee across organizational levels. The third seminar focuses on identifying participants' leadership qualities. The seminars are designed to help each individual participant understand and appreciate one another. They can involve both instructor-led training to convey important concepts as well as getting participants out of their comfort zones through racing on the motorsports tracks with their teams.

Sources: Based on A. Pratt, "Rev Your Team's Engine: Ziegler Motorsports Aims to Make Organizational Training Fun (and Fast!)," Zeigler Auto Group, from www.zeigler.com/269-magazine-article-on-zeigler.htm, accessed January 22, 2021; "Our Seminar Packages," Elevate, from www.elevate.com, accessed January 22, 2021; Al Jones, "Kalamazoo-Based Zeigler Buys More Car Dealerships in Chicago Area," *MLive*, January 21, 2016, www.mlive.com/news/kalamazoo/index.ssf/2018/03/zeigler_auto_group_buys_more_f.html; Jon McKenna, "Training Helps Sustain Michigan Dealership Group's Evolution into a Substantial Corporate Player," *CBT Automotive Network*, December 1, 2015, from www.cbtnews.com/training-helps-sustain-michigan-dealership-groups-evolution-into-a-substantial-corporate-player; Arlena Sawyers, "Getting Schooled in the Car Dealership Business," *Automotive News*, June 1, 2015, from www.autonews.com/article/20150601/RETAIL07/306019979/getting-schooled-in-the-car-dealership-business, accessed April 1, 2018.

Introduction

The Zeigler Auto Group uses a combination of training methods to develop the skills of its staff members. For most companies, including the Zeigler Auto Group, training methods have to be developed or purchased within a budget, there usually is a sense of urgency for the training, and training must be made available to those employees who need it.

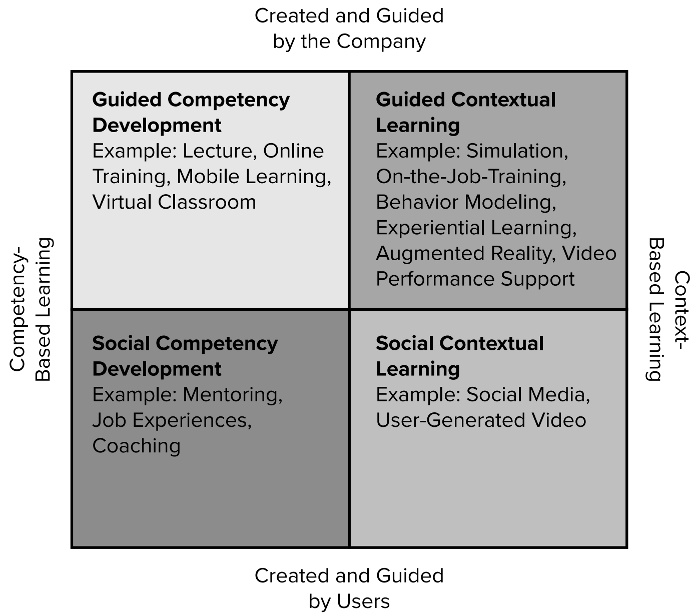
Several studies have shown that most workplace learning doesn't occur through formal courses or programs but rather on the job, informally, and through social interactions with others.[1] For example, one study of executives found that 70 percent of learning occurred on the job in the workplace, 20 percent occurred socially through coaching and mentoring, and only 10 percent occurred through formal classroom instruction. This is known as the **70-20-10 model** of learning. Many trainers rely on this model for designing or choosing training methods that will be included in courses and programs. For example, HNTB, an infrastructure design firm, offers to reimburse employees' tuition up to $10,000 per year.[2] However, it is only a small part of the training the company offers. Seventy percent of learning occurs on the job, 10 percent happens in a classroom, and the rest comes through social relationships and mentoring. Similar to the emphasis on conditions for learning and transfer discussed in **Chapter Four**, "Learning and Transfer of Training," this model suggests that to increase the likelihood that learning will occur in training, the content needs to be meaningful and practical, the learner has to be actively involved in the learning process, and the learning needs to involve feedback and reinforcement from others.

Before we discuss specific training methods, it is important for you to consider more broadly the training methods that companies are using to help employees learn and how the emphasis placed on these different methods is changing. **Figure 7.1** shows a learning system with four quadrants. This learning system shows that how and what employees learn varies and influences the type of training methods used.[3] Guided competency development means that the company has defined a broad set of competencies or skills for positions or for the entire company. Training and development methods such as lectures or online training are directed at the most common needs in the company. Context-based learning, learning that occurs on the job and during the everyday performance of work, tends to be more unique to the employee's needs and includes training methods such as on-the-job training (OJT), simulations, and mobile learning. Both guided competency development and guided contextual learning are usually formal training activities designed and developed by the company to achieve specific learning goals. Employees are expected to participate in these learning activities. The bottom quadrants include social learning, that is, learning activities that involve employees collaborating with each other either one-to-one or in groups or teams. Social competency development enhances specific job-related competencies through interaction with others, such as a mentor or coach, or through encountering challenging job experiences. The competencies that are developed are typically not necessary for successful performance of one's job but help prepare employees for future roles or positions. As a result, mentoring, coaching, and job experiences are considered development activities. We discuss development activities in **Chapter Nine**, "Employee Development and Career Management." Social contextual learning is informal and peer-to-peer, and it occurs spontaneously on an as-needed basis. It can involve employees sharing knowledge on issues, problems, and topics related to their current job. Employees have always learned from face-to-face meetings and phone conversations with peers. What is new is that the increased availability and access to smartphones and tablet computers provide a multimedia, low-cost, easy-to-use, and familiar way to interact with others using social media such as blogs, wikis, social networks (such as Facebook), and microblogs (such as Twitter). Employees can also share video they have recorded with their smartphones. This provides many possibilities for technology-aided social contextual learning. We will discuss blogs, wikis, social networks, and microblogs in **Chapter Eight**, "Technology-Based Training Methods." Keep in mind that training methods can cut across the quadrant shown in **Figure 7.1** if they include multiple types of learning, such as a virtual classroom that includes simulations and use of social networks.

More and more companies are using training methods from all four quadrants. This allows employees to have more choice in how and when they learn. It also recognizes the need for both dedicated training time using traditional methods (such as instructor-led courses) as well as just-in-time learning that can occur through accessing relevant content (such as a video) or interacting with peers and experts (such as through social media). Traditionally, training and development activities have been largely "instructor focused." This means that the instructor or trainer, along with the company, has the primary responsibility for ensuring that employees learn.[4] The learner plays a passive role as the receiver of information, and learning occurs to the extent that the appropriate conditions are provided by the learning "experts" or are inherent in the learning method. For example, the instructor bears the responsibility for identifying what should be learned, determining the most appropriate methods, and evaluating the extent to which knowledge and skill acquisition have resulted from the learning activity. Increased recognition of the 70-20-10 model has resulted in training that emphasizes a more active role for the learner and informal learning.[5] Also, the greater availability and use of online and mobile technology (e.g., iPads) to deliver instruction and facilitate social collaboration gives the employee the opportunity to choose when, how, from whom, and even what content to learn.[6] In the next section, **Figure 7.2** provides an overview of the extent to which the many different training methods are being used by companies today. Instructor-led classroom training remains the most frequently used method, but the use of online learning, virtual classroom, or a combination of methods continues to grow.

Regardless of whether the training method is traditional or technology based, for training to be effective, it needs to be based on the training design model shown in **Figure 1.2** in **Chapter One**, "Introduction to Employee Training and Development." Needs assessment, a positive learning environment, and transfer of training are critical for training program effectiveness. Recall the discussions of needs assessment, learning, and transfer of training in **Chapters Three**, **Four**, and **Five**.

FIGURE 7.1 **A Learning System**



Source: Based on J. Meister and K. Willyerd, *The 2020 Workplace; How Innovative Companies Attract, Develop, and Keep Tomorrow's Employees Today* (New York: Harper Business 2010).

This chapter and **Chapter Eight** present various training methods. This chapter focuses on **traditional training methods**, which require an instructor or a facilitator and involve face-to-face interaction between trainees. However, most methods discussed here can be adapted for online, virtual reality, mobile learning, or other new training technologies used for training delivery or instruction. For example, a classroom lecture can occur face to face with trainees (traditional training) or can be delivered through a virtual classroom, in which the instructor is not in the same room as the trainees. Also, instruction can be real time (synchronous) or time delayed (asynchronous). Through technology, a lecture can be attended live (although the trainees are not in the same classroom as the trainer), or the lecture can be recorded using web conferencing software such as Zoom. The lecture can be viewed by the trainees at their convenience using their smartphone or notebook computer.

Chapter Eight discusses web-based training, e-learning, virtual reality, augmented reality, artificial intelligence, and social media. The increased use of technology-based training for delivery of instruction is occurring because of the potential increase in learning effectiveness, as well as the reduction in training costs.

Keep in mind that many companies' training programs use a combination of methods to capitalize on each method's strengths for learning and transfer. To train its business services employees in how to solve customer issues, during the first meeting Intermedia uses virtual instructor-led training, video, lab activities, and role-play scenarios.[7] Employees can access the training once they are back on the job to refresh their skills. Health Decisions, a clinical research organization, needed to expand its staff expertise in women's health issues.[8] To do so it developed a training program that included video, e-learning, and instructor-led sessions.

The traditional training methods discussed in this chapter are organized into three broad categories: presentation methods, hands-on methods, and group building methods.[9] The following sections provide a description of each method, a discussion of their advantages and disadvantages, and tips for the trainer who is designing or choosing the method. The chapter concludes by comparing methods based on several characteristics, including the learning outcomes influenced, the extent to which the method facilitates learning transfer, the cost, and the effectiveness.

Presentation Methods

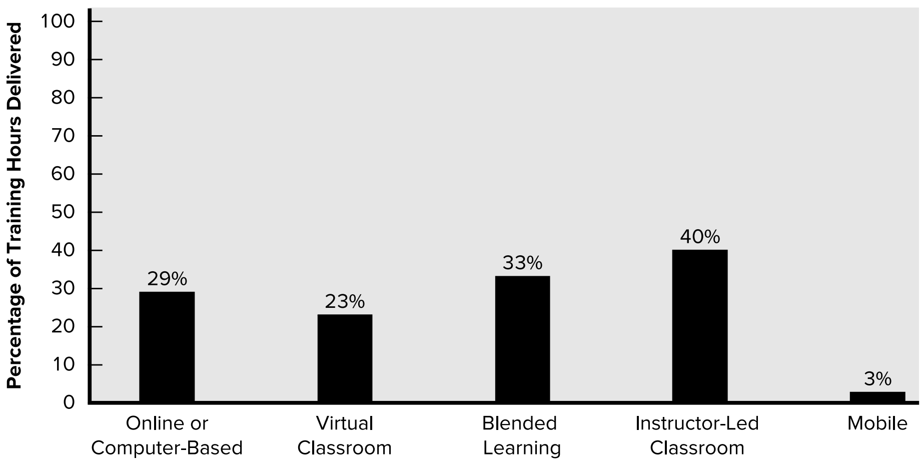
Presentation methods are methods in which trainees are passive recipients of information. This information may include facts, processes, and problem-solving methods. Lectures and audiovisual techniques are presentation methods. It is important to note that instructor-led classroom presentation methods may include lectures, video, workbooks and manuals, DVDs, and games. That is, a mix of methods can actively engage trainees in learning and can help with transfer of training.

Lecture

In a **lecture**, trainers communicate through spoken words what they want the trainees to learn. The communication of learned capabilities is primarily one-way—from the trainer to the audience. As **Figure 7.2** shows, instructor-led classroom presentation remains a popular training method despite new technologies such as interactive video and computer-assisted instruction.

Lectures have several uses and advantages.[10] A lecture is one of the least expensive, least time-consuming ways to present a large amount of information efficiently and in an organized manner to groups of trainees. Lectures are useful when the instructor is the main knowledge holder, and it is the most efficient and direct way to provide learners with that knowledge. Lectures that are scripted can be used to deliver a consistent message. A lecture can also demonstrate a subject-matter expert's passion and enthusiasm for a topic. Alamo Pharma Services uses regional sales trainers, trainers, and company leadership as presenters in its training courses. In addition to presentations, the courses include polling, discussion, video, and online chat rooms.[11] Also, TED Talks (see www.ted.com) are a good example of how lectures can be motivational, interesting,

FIGURE 7.2 **Use of Training Methods**



Source: Based on "2020 Training Industry Report," *training* (November-December 2020), pp. 22–37.

and provide a simple message to learners in less than 20 minutes. Lectures are also used to support other training methods such as behavior modeling and technology-based techniques. For example, a lecture may be used to communicate information regarding the purpose of the training program, conceptual models, or key behaviors to trainees prior to their receiving training that is more interactive and customized to their specific needs.

Table 7.1 describes several variations of the standard lecture method. All have advantages and disadvantages.[12] Team teaching brings more expertise and alternative perspectives to the training session. Team teaching does require more time on the part of trainers, however, not only to prepare their particular session but also to coordinate with other trainers, especially when there is a great deal of integration between topics. Panels are good for showing trainees different viewpoints in a debate. A potential disadvantage of a panel, however, is that trainees who are relatively naive about a topic may have difficulty understanding the important points. Guest speakers can motivate learning by introducing relevant examples and applications. For guest speakers to be effective, trainers need to set expectations with speakers regarding how their presentation should relate to the course content. Student presentations may increase the material's meaningfulness and trainees' attentiveness, but they can inhibit learning if the trainees do not have presentation skills.

TABLE 7.1 Variations of the Lecture Method

Method	Description
Standard lecture	Trainer talks and may use visual aids provided on the blackboard, whiteboard, or Microsoft PowerPoint slides, while trainees listen and absorb information.
Team teaching	Two or more trainers present different topics or alternative views of the same topic.
Guest speakers	A speaker or speakers visit the session for a predetermined time period. Primary instruction is conducted by the instructor.
Panels	Two or more speakers present information and ask questions.
Student presentations	Groups of trainees present topics to the class.

The lecture method has several disadvantages. Lectures tend to lack participant involvement, feedback, and meaningful connection to the work environment—all of which inhibit learning and transfer of training. Lectures appeal to few of the trainees' senses because trainees focus primarily on hearing information or seeing facts, principles, or processes. Lectures also make it difficult for the trainer to judge quickly and efficiently the learners' level of understanding. To overcome these problems, the lecture is often supplemented with question-and-answer periods, discussion, video, games, case studies, or simulations. These techniques allow the trainer to build into the lecture more active participation, job-related examples, and exercises, which facilitate learning and transfer of training.

For example, EY combines e-learning with a virtual classroom and face-to-face instruction for training its tax professionals.[13] The virtual classroom courses are 30 minutes long. In the first 10 minutes, online polling is used to test participants' understanding of key concepts covered in the e-learning course. The trainer is encouraged to help clarify any key concepts that the participants don't understand. Following the polling, participants work in five- or six-person virtual teams on case studies. Next, participants attend the live, face-to-face class in which they complete income tax returns using EY's processes and technology.

Audiovisual Techniques

Audiovisual instruction includes overheads, slides, and video. Video is used for improving communications skills, interviewing skills, and customer-service skills and for illustrating how procedures (e.g., welding or removing an appendix) should be followed. Video is usually used in conjunction with lectures to show trainees real-life experiences and examples. Videos on specific topics or skills can be purchased from training vendors, developed by recording a subject-matter expert discussing a particular topic or demonstrating a procedure, or accessed for free from websites such as YouTube.

Ally Auto used video to show finance employees the entire supply chain for a car.[14] That is, how it moves from the manufacturers to the dealership to the person who buys the car. Employees had previously indicated that they wanted to gain a stronger understanding of the big picture of what Ally Auto does. Ally Auto believes the video has considerable advantages over other training methods. For example, the video is accessible to employees working virtually, onsite, and as field agents. Also, the video uses storytelling and computer animation, which appeals to many audiences regardless of their level of experience in the company. The video has led to cost savings of about $425,000 compared with instructor-led training.

Most problems in using video result from the creative approach used.[15] For example, common problems include too much content for the trainee to learn; poor dialogue between the actors (which hinders the credibility and clarity of the message); overuse of humor or music; and drama that makes it confusing for the trainee to understand the important learning points emphasized in the video.

Hands-On Methods

Hands-on methods are training methods that require the trainee to be actively involved in learning. These methods include on-the-job training (OJT), simulations, case studies, business games, role playing, and behavior modeling. These methods are ideal for developing specific skills, understanding how skills and behaviors can be transferred to the job, experiencing all aspects of completing a task, or dealing with interpersonal issues that arise on the job.

On-the-Job Training

On-the-job training (OJT) refers to new or inexperienced employees learning in the work setting and during work by observing peers or managers performing the job and then trying to imitate their behavior. OJT is one of the oldest and most used types of informal training, especially in manufacturing companies.[16] It is considered informal because it does not necessarily occur as part of a training program and because managers, peers, or mentors serve as trainers. If OJT is too informal, however, learning is less likely to occur. OJT can be useful for training newly hired employees, upgrading experienced employees' skills when new technology is introduced, cross-training employees within a department or work unit, and orienting transferred or promoted employees to their new jobs.

OJT takes various forms, including apprenticeships and self-directed learning programs. (Both of these are discussed later in this section.) OJT has several advantages over other training methods.[17] It can be customized to the experiences and abilities of trainees. Training is immediately applicable to the job because OJT occurs on the job using actual tools and equipment and actual job tasks. As a result, trainees are highly motivated to learn and the skills learned in OJT more easily transfer to the job. Both trainees and trainers are at the job site and continue to work while training occurs. This means that companies save the costs related to bringing trainees to a central location, hiring trainers, and renting training facilities. Finally, OJT can be offered at any time, and trainers will be available because they are peers or managers.

At Nomad Global Communication Solutions, a company that builds and equips disaster response trailers, each task in the manufacturing process is assigned to an employee expert who breaks every step into simple, easy-to-understand language.[18] The expert works alongside every new employee, explaining the steps needed to complete the assigned task. The expert repeats steps that appear confusing and asks questions to ensure that the employee understands what he is doing and is able to remember the steps.

Schneider, a trucking company, uses classroom training, simulators, and OJT involving driving trucks on local roads and highways to train new or inexperienced truck drivers.[19] The final phase of training involves driving on actual delivery routes accompanied by a training engineer. The training engineer observes, provides driving suggestions, and shares useful tips for how to live on the road.

OJT is an attractive training method because, compared to other methods, it needs less investment in time or money for materials, the trainer's salary, or instructional design. Managers or peers who are job-knowledge experts are used as instructors. As a result, it may be tempting to let them conduct the training as they believe it should be done.

There are several disadvantages to this unstructured approach to OJT. Managers and peers may not use the same process to complete a task. They may pass on bad habits as well as useful skills. Also, they may not understand that demonstration, practice, and feedback are important conditions for effective OJT. Unstructured OJT can result in poorly trained employees, employees who use ineffective or dangerous methods to produce a product or provide a service, and products or services that vary in quality.

OJT must be structured to be effective. **Table 7.2** shows the principles of structured OJT. Because OJT involves learning by observing others, successful OJT is based on the principles emphasized by social learning theory. These include the use of a credible trainer, a manager or peer who models the behavior or skill, communication of specific key behaviors, practice, feedback, and reinforcement. For example, at Rochester Gas and Electric in Rochester, New York, radiation and chemistry instructors teach experienced employees how to conduct OJT.[20] While teaching these employees how to demonstrate software to new employees, the trainer may ask the employees to watch other OJT instructors as they train new recruits so that they can learn new teaching techniques. Regardless of the specific type, effective OJT programs include:

1. A policy statement that describes the purpose of OJT and emphasizes the company's support for it.
2. A clear specification of who is accountable for conducting OJT. If managers conduct OJT, this is mentioned in their job descriptions and is part of their performance evaluations.
3. A thorough review of OJT practices (program content, types of jobs, length of program, cost savings) at other companies in similar industries.
4. Training of managers and peers in the principles of structured OJT (see **Table 7.2**).
5. Availability of lesson plans, checklists, procedure manuals, training manuals, learning contracts, and progress reports for use by employees who conduct OJT.
6. Evaluation of employees' basic skills (reading, computation, and writing) before OJT.[21]

Apprenticeship

Apprenticeship is a work-study training method with both on-the-job and classroom training.[22] The typical length of an apprenticeship is four years, but it can range from two to six years. To qualify as a registered apprentice under state or federal guidelines, apprentices in most cases must complete at least 144 hours of classroom instruction and, depending on state rules, obtain a certain number of hours of on-the-job experience.[23] For example, learners in the Ohio State Apprenticeship Program are required to complete 144 hours of instruction and a minimum of 2,000 hours of paid, OJT.[24] Once their training is complete, apprentices

TABLE 7.2 Principles of OJT

Preparing for Instruction

1. Break down the job into important steps.
2. Prepare the necessary equipment, materials, and supplies.
3. Decide how much time you will devote to OJT and when you expect the employees to be competent in skill areas.

Actual Instruction

1. Tell the trainees the objective of the task and ask them to watch you demonstrate it.
2. Show the trainees how to do the task without saying anything.
3. Explain the key points or behaviors. (Write out the key points for the trainees, if possible.)
4. Show the trainees how to do it again.
5. Have the trainees do one or more single parts of the task and praise them for correct reproduction (optional).
6. Have the trainees do the entire task and praise them for correct reproduction.
7. If mistakes are made, have the trainees practice until accurate reproduction is achieved.
8. Praise the trainees for their success in learning the task.

Transfer of Training

Provide support materials and job aids such as flowcharts, checklists, or procedures. Arrange for manager or trainer support and observation on the job, especially for difficult or complex tasks.

Evaluation

Prepare and allow time for final tests and exercises and surveys of trainee reactions.

Sources: Based on R. Buckley and J. Caple, "Developing One-to-One Training Programs," *T+D* (April 2010), pp. 108–09; W. J. Rothwell and H. C. Kazanas, "Planned OJT Is Productive OJT," *Training and Development Journal* (October 1990), pp. 53–55; P. J. Decker and B. R. Nathan, *Behavior Modeling Training* (New York: Praeger Scientific, 1985).

are called *journey workers*, and they earn certification from the U.S. Department of Labor or a state apprenticeship agency. **Table 7.3** shows the top 10 occupations for apprentices. In 2018, there were approximately 585,000 active apprenticeships in more than 23,000 registered apprenticeships programs.[25] Ninety-four percent of apprentices who complete an apprenticeship program gain employment, with an average annual salary of $70,000.[26] Apprenticeships can be sponsored by individual companies or by groups of companies cooperating with a union. The typical costs of apprenticeships for employers ranges from $170,000 to $250,000, including four years of classroom training, medical benefits, and salary on the job while the apprentices learn. Apprentices are not required to work for the company after they graduate. Unions' collective bargaining agreements designate what proportion of union dues or hours worked by its members are used to fund apprenticeship programs. As **Table 7.3** shows, some of the most popular apprenticeship programs are in electrical work, plumbing, pipefitting, steamfitting, and truck driving. **Table 7.4** provides an example of an apprenticeship program for a machinist.

In an apprenticeship program, the hours and weeks that must be devoted to completing specific skill units are clearly defined. The OJT involves assisting a certified tradesperson (a journey worker) at the work site. The OJT portion of the apprenticeship follows the guidelines for effective OJT by including modeling, practice, feedback, and evaluation.[27] First, the employer verifies that the trainee has the required knowledge of the operation or process. Next, the trainer (who is usually a more experienced, licensed employee) demonstrates each step of the process, emphasizing safety issues and key steps. The senior employee provides the apprentice with the opportunity to perform the process until all are satisfied that the apprentice can perform it properly and safely.

TABLE 7.3 **Examples of the Top Occupations for Apprentices**

Occupation	Active Apprentices
Electrician	715,400
Plumber, Pipefitters, and Steamfitters	500,300
Carpenter	1,006,500
Construction Laborers	1,405,000
Heavy and Tractor Trailer Truck Drivers	1,958,800
Electrical Power Line Installers and Repairers	119,400
Sheet Metal Worker	143,00

Source: Based on U.S. Bureau of Labor Statistics (employment growth, employment, and wages), U.S. Department of Labor (selected occupations, based on federal data on active apprentices in fiscal year 2018) from Elka Torpey (updated by Ryan Farrell), "Apprenticeships: Outlook and wages in selected occupations," Career Outlook, U.S. Bureau of Labor Statistics, November 2019, from https://www.bls.gov/careeroutlook/2019/article/apprenticeships-outlook-wages-update.htm, accessed March 6, 2021.

Apprenticeships have benefits for both the learner and the company.[28] Learners earn pay while they learn and their wages increase automatically as their skills improve. Learners often receive a job offer and good wages from the company that sponsors their training. Apprentices gain a wide range of skills and knowledge based on their classroom and on-the-job experience. They tend to be cross-trained, which means they can move to different tasks and jobs. For example, an individual who completes a machinist apprenticeship can begin working as a machinist and then move to other areas of production, sales, and eventually management. Unlike the expense of a college education, the costs for the learner are usually limited to textbooks.

Apprenticeship programs benefit employers by providing them with the skills they need but are difficult to find in the labor market.[29] Employers also benefit from high employee retention and loyalty rates among apprentices, improved morale and emphasis on continuous learning, a talent pool, improved safety, and training customized to their needs.

Dartmouth-Hitchcock Medical Center started its apprenticeship program to identify qualified candidates in medical coding and billing positions.[30] They could not find enough certified coders or individuals to train. Dartmouth-Hitchcock's curriculum includes a 13-week boot camp. All of the apprentices passed a national coding exam. The program was so successful that the medical center used the apprenticeship model to train medical assistants and pharmacy technicians. The program helped Dartmouth-Hitchcock find talented individuals who want to work but need to develop their skills to work in the medical field.

Companies can use apprenticeships to attract employees from underutilized labor sources, such as veterans, community-college students, under and unemployed workers and retirees. Consider the apprenticeship programs by the Federation for Advanced Manufacturing Education (FAME), JPMorgan Chase, and Aon.[31] FAME provides employers and apprentices with the skills they need to operate and repair machinery. FAME pairs employers with community colleges. To be selected for FAME, students interview with employers who evaluate their past grades, standardized test scores, and interpersonal skills. Each week, students in FAME spend two days a week in class and three days on the shop floor. They learn how to maintain and repair machinery as well as subjects such as English and math and teamwork skills. Students complete FAME in five semesters, earning an associate degree. After completing the program, students usually work for the company that sponsored them.

JPMorgan Chase has partnered with Apprenti to launch yearlong paid apprenticeships in Columbus, Ohio, geared specifically for military veterans. The veterans will attend Java training prior to their apprenticeship

TABLE 7.4 Example of a Machinist Apprenticeship

Hours	Weeks	Unit
240	6.0	Bench Work
360	9.0	Drill Press
240	6.0	Heat Treat
200	5.0	Elementary Layout
680	17.0	Turret Lathe (Conventional and Numerical Control)
800	20.0	Engine Lathe
320	8.0	Tool Grind
640	16.0	Advanced Layout
960	24.0	Milling Machine
280	7.0	Profile Milling
160	4.0	Surface Grinding
240	6.0	External Grinding
280	7.0	Internal Grinding
200	5.0	Thread Grinding
520	13.0	Horizontal Boring Mills
240	6.0	Jig Bore/Jig Grinder
160	4.0	Vertical Boring
600	15.0	Numerical Control Milling
240	6.0	Computer Numerical Control
640	16.0	Related Training
8,000	200.0	TOTAL
Probationary: **The following hours are included in the totals above, but must be completed in the first 1,000 hours of apprenticeship:**		
80	2.0	Drill Press (probation)
280	7.0	Lathe Work (probation)
360	9.0	Milling Machine (probation)
40	1.0	Elementary Layout (probation)
80	2.0	Related Training (probation)
840	**21.0**	**TOTAL**

Source: A. H. Howard III, "Apprenticeship," In *The ASTD Training and Development Handbook*, 4th ed., ed. R. L. Craig (New York: McGraw-Hill, 1996), p. 808.

and receive specialized education, a dedicated mentor, and the opportunity to network with other professionals. They may receive an offer for a full-time job after completing the program.

In an effort to address growing skills gaps in the United States and establish a reliable talent pipeline, Aon helped create the employer-led initiative Chicago Apprentice Network (CAN), which brings large employers together with the goal of creating an entry point for employers to explore apprenticeship, learn best practices, and create a system of job training and workforce development. Aon apprentices work out of Aon offices in Chicago. Apprentices work 28 hours a week and take college classes for 12 hours a week. Apprentices are assigned a mentor and placed on a team with peers they will collaborate with on a daily basis. Apprentices are considered full-time employees, receive full benefits, and have their tuition paid for as they work toward their associate's degree.

Besides the development costs and time commitment that management and journey workers have to make to apprenticeship programs, another disadvantage of many of these programs is that, despite efforts to be inclusive, there still may be limited access for minorities and women.[32] Also, there is no guarantee that jobs will be available when the program is completed. This is especially a problem when the state of the economy has a negative effect on employment in industries that use apprenticeships.

Simulations

A **simulation** is a training method that represents a real-life situation, with trainees' decisions resulting in outcomes that mirror what would happen if they were on the job. Simulations can be used as a stand-alone training method or incorporated into a course or program.[33] They vary in length. Short simulations can be 5 to 12 minutes long, focusing on a single subject area. Trainees are asked to make many decisions during a short simulation by responding to multiple-choice questions. Short simulations do not provide the immersive experience of a longer more complex simulation, which mimics a complex situation or type of equipment (such as a flight simulator for pilots). But short simulations do get learners to interact with the content, helping to facilitate and reinforce learning and transfer of training at a lower cost and time commitment than is involved with complex simulations.

Simulations, which allow trainees to see the impact of their decisions in an artificial, risk-free environment, are used to teach production and process skills as well as management and interpersonal skills. As you will see in **Chapter Eight**, new technology has helped in the development of virtual reality, a type of simulation that even more closely mimics the work environment.

Simulators replicate the physical equipment and conditions that employees encounter on the job. For example, Penn Medicine uses simulations as part of its "First Five Minutes" training program.[34] The purpose of the program is to train staff to provide medical assistance prior to the arrival of paramedics in the event of an unexpected patient emergency, such as a heart attack. During the simulation, a patient, accompanied by a family member, reports chest pain once a staff member escorts them to an exam room (the patient and the family members are trained actors). Staff members then simulate contacting 911, using the available automated defibrillator and medical supplies, and start CPR and any other medical care on a patient manikin. The simulation ends with the arrival of paramedics. A facilitator debriefs the event with the practice staff and leadership, enabling them to self-discover team strengths as well as any policy, space, equipment, or knowledge constraints that could interfere with prompt and safe care delivery. In addition, the individuals participating in the simulation receive feedback and other recommendations, which could include the need for more training. As a result of participating in the simulation, staff members feel they are better prepared to address emergencies and have suggested changes in the location of medical supplies and the defibrillator to spend up their response time.

The Federal Bureau of Investigation (FBI) built a town in Virginia, Hogan's Alley, close to its academy to train FBI agents and other law enforcement officers.[35] In the town, which has an actual working Subway sandwich shop, FBI recruits and police officers practice different types of scenarios using paint guns and blank ammunition rather than the real thing. Hogan's Alley includes everything you might have in a town: bank, inn, stores, restaurants, homes, warehouses, and a movie theater. At Hogan's Alley, new agents are taught the latest tactical techniques and are immersed in realistic, stressful scenarios where they are expected to incorporate basic tactics, investigative techniques, firearms skills, and defensive tactics in order to make the right decision. Trainees can practice different scenarios in the simulated town including stopping terrorist plots, interviewing witnesses, arresting suspects in their hotel rooms, infiltrating drug smuggling schemes, and securing crime scenes. Suspects, known criminals, and innocent bystanders (depending on the scenario) are played by paid actors.

There are several features that simulators must have to be effective.[36] Trainees need to interact with the content, the trainers, and other trainees. Feedback should be provided to trainees on their performance in the simulation. Trainees should attend a debriefing led by a trainer or facilitator to help them understand what they have learned and how to apply it in their work. Finally, simulators need to be realistic. That is, they need to be similar to the equipment and situations that the trainee will encounter on the job. Recall the discussion of near transfer in **Chapter Five**, "Program Design." Simulators need to have elements identical to those found in the work environment. The simulator needs to respond exactly like the equipment would under the conditions and response given by the trainee. For example, flight simulators include distractions that actual pilots must deal with, such as hearing chimes in the cockpit from traffic alerts generated by an onboard computer warning system while listening to directions from an air traffic controller.[37] For this reason, simulators are expensive to develop and need constant updating as new information about the work environment is obtained.

Case Studies

A **case study** is a story or adapted version of a realistic topic that revolves around an individual, company, product, situation, or event. The story usually focuses on a central idea or concept; it describes a main event or issue and usually provides the impact of that event or issue. Four types of cases are most common.[38]

Illustrative case studies include one or two instances of an event or a concept to provide trainees with information and clarity. Explanatory case studies are those that describe events or phenomena where the results are known and not open to interpretation. Intrinsic case studies focus on a person such as a leader, manager, or patient. Critical instance case studies are those that examine one or more situations to emphasize a point or test an assumption.

In case studies, trainees are required to analyze and critique the actions taken, indicating the appropriate actions and suggesting what might have been done differently.[39] A major assumption of the case study approach is that employees are most likely to recall and use knowledge and skills if they learn through a process of discovery.[40] Cases may be especially appropriate for developing higher-order intellectual skills such as analysis, synthesis, and evaluation. These skills are often required by managers, physicians, and other professional employees. Cases also help trainees develop the willingness to take risks given uncertain outcomes, based on their analysis of the situation. To use cases effectively, the learning environment must give trainees the opportunity to prepare and discuss their case analyses. Also, face-to-face or electronic communication among trainees must be arranged. Because trainee involvement is critical for the effectiveness of the case method, learners must be willing and able to analyze the case and then communicate and defend their positions.

Table 7.5 presents the process used for case development. The first step in the process is to identify a story (i.e., a problem or situation). It is important to consider if the story is related to the instructional objectives, will provoke a discussion, forces decision making, can be told in a reasonable time period, and is applicable to the situations that trainees may face. Information on the problem or situation must also be readily accessible. The next step is to research documents, interview participants, and obtain data that provide the details of the case. The third step is to outline the story and link the details and exhibits to relevant points in the story. Fourth, administrative issues need to be decided. This includes determining the media used to present the case. Also, at this point in case development, the trainer should consider how the case exercise will be conducted. This may involve determining if trainees will work individually or in teams, and how the students will report results of their analyses. Finally, the actual case materials need to be prepared. This includes assembling exhibits (figures, tables, articles, job descriptions, etc.), writing the story, preparing questions to guide trainees' analysis, and writing an interesting, attention-getting case opening that will attract trainees' attention and provide a quick orientation to the case.

TABLE 7.5 Process for Case Development

1. Identify a story.
2. Gather information.
3. Prepare a story outline.
4. Decide on administrative issues.
5. Prepare case materials.

Sources: Based on A. Vira, "The Case for Case Studies," *T+D* (February 2020), pp. 59–63; J. Alden and J. K. Kirkhorn, "Case Studies." In *The ASTD Training and Development Handbook*, 4th ed., ed. R. L. Craig (New York: McGraw-Hill, 1996), pp. 497–516

There are a number of available sources of preexisting cases. A major advantage of preexisting cases is that they are already developed, but a disadvantage is that the case may not actually relate to the work situation or problem that the trainee will encounter. It is especially important to review preexisting cases to determine how meaningful they will be to the trainee. Preexisting cases on a wide variety of problems in business management (e.g., in human resource management, operations, marketing, and advertising) are available from Harvard Business School, the Darden Business School at the University of Virginia, Ivey Business School at the University of Western Ontario, and various other sources.

KLA-Tencor uses case studies as part of a program known as "The Situation Room" to help managers learn how to deal with common leadership problems.[41] A group of between 8 and 20 managers get together face to face or virtually each month for one year and read one of twelve 350–400 word case studies. Each case is based on a real situation or problem that occurred at KLA-Tencor. It has to be broad enough for most managers to have experienced the situation, issue, or problem, but specific enough to be useful. After they read the case, the managers are given three minutes to write their response to the situation. Participants share their responses and their peers provide feedback. If a peer doesn't like a response, he or she can provide an alternative. After all participants have shared their responses, four teams are formed and they are given "homework." Between the first and the second sessions, participants are expected to meet for an hour in their teams and review content, models, methodology, and/or tools that they have been exposed to in prior courses. Based on this review, they are asked to provide a response to the situation. During the second session participants share their prepared responses and discuss them. Based on what they learned from the first and second sessions, participants are asked to prepare a personal response focusing on how they will handle the situation if they encounter it on their job. The outcomes of the sessions are documented on the company's knowledge management system so practices can be shared with other managers facing similar challenges. Managers completing the program have found it valuable. KLA-Tencor is currently analyzing employee engagement survey scores to see if managers who participated in The Situation Room have improved in the leadership and management categories assessed on the survey.

Business Games

Business games require trainees to gather information, analyze it, and make decisions. Business games are primarily used for management skills development. Games stimulate learning because participants are actively involved and because games mimic the competitive nature of business. The types of decisions that participants make in games include all aspects of management practice: labor relations (agreement in contract negotiations), ethics, marketing (the price to charge for a new product), and finance (financing the purchase of new technology). Games are also used for developing job-specific skills such as patient triage or aircraft repair. They are similar to simulations in that they can be used for training that otherwise would involve risk of injury or accidents or would be too costly.[42]

Typical games have several characteristics.[43] Games involve a contest among trainees or teams of trainees or against an established criterion such as time or quantity. Games are designed to demonstrate an understanding or application of a knowledge, skill, or behavior. Several alternative courses of action are available to trainees, and trainees can estimate the consequences of each alternative, but only with some uncertainty. Trainees do not know for certain what the consequences of their actions will be because the consequences are partially based on the decisions of other game participants. Finally, rules limit participant behavior.

To ensure learning and transfer of training, games used in training should be simple enough that trainees can play them in a short period of time. The best games generate excitement among the participants and interest in the game. Meaningfulness of the game is enhanced if it is realistic. Trainees need to feel that they are participating in a business and acquiring knowledge, skills, and behaviors that are useful on the job.[44] Debriefing from a trainer can help trainees understand the game experience and facilitate learning and transfer. Debriefing can include feedback, discussions of the concepts presented during the game, and instructions in how to take the knowledge, skills, or behavior emphasized in the game and use them at work. **Table 7.6** contains some questions that can be used for debriefing.

TABLE 7.6 Questions to Use When Debriefing a Game

- How did the score of the game affect your behavior and the behavior of the team?
- What did you learn from the game?
- What aspects of the game remind you of situations at work?
- How does the game relate to your work?
- What did you learn from the game that you plan to use at work?

Source: Based on S. Sugar, "Using Games to Energize Dry Material." In *The ASTD Handbook of Training Design and Delivery*, eds. G. Piskurich, P. Beckschi, and B. Hall (New York: McGraw-Hill, 2000), pp. 107–20.

Part of University Health System's nursing orientation program includes a game in which the new hires can earn points by answering questions.[45] The game board is designed similar to a stethoscope. In the center of the board, core values including professional collaboration, leadership, practice excellence, and patient-centered care spread out from a human body. Each table where participants are seated has a game board and a touch pad new hires use to respond to questions. A light tower at the front of the room indicates correct answers and a large scoresheet visible to all provides an incentive for participants to answer as many questions as they can.

A review of research on computer games shows that trainees learn more when they are actively involved in learning the content (rather than reading text or listening), they have unlimited access to the game, and the game is used as a supplement to other training methods, such as lecturing.[46] Games may give team members a quick start at developing a framework for information and may help develop cohesive groups. For some groups (such as senior executives), games may be more meaningful training activities (because the game is realistic) than presentation techniques such as classroom instruction.

Role Plays

Role plays refer to experiences in which trainees take on a role such as a manager, client, or disgruntled employee and explore what is involved in the role.[47] Role plays are usually included in training programs involving interpersonal skills such as communications, sales, providing performance feedback, coaching, leadership, and team building. Role plays can be completed in small groups of two to three persons in which all trainees complete the role play. Alternatively, several trainees can volunteer to role-play while the remaining trainees observe them. In a role play, outcomes depend on the emotional (and subjective) reactions of the other trainees.

At Wequassett Resort and Golf Club in Chatham, Massachusetts, the training schedule considers both the need to make guests happy and the need to help both new and returning employees learn how to do that.[48] From October to April, the resort is closed, but 340 employees start work in the spring before the resort opens. Half of the employees are receiving training for the first time, while the returning employees need refresher training. Wequassett Academy offers 70 courses in four schools (customer intimacy, technical training, information and technology, and management). The goal of training is to provide the kind of service that will encourage guests to come back again, as well as recommend the resort to their friends. The resort's training is in step with its business, which requires a personal touch. Training involves classroom instruction with role plays, as well as the use of videos. Employees have to successfully complete competency checklists before they are able to work. For example, food servers may have to take courses in menu knowledge, food service, and wine knowledge.

For role plays to be effective, trainers need to engage in several activities before, during, and after the role play. **Table 7.7** shows the activities that comprise effective role plays.

TABLE 7.7 Activities for Effective Role Plays

- Provide background information on the purpose of and context for the role play.
- Make sure that a script is provided with enough detail for trainees to understand their roles.
- Arrange the room so trainees can see and hear the role players.
- Develop and use observation sheets and checklists that emphasize the issues in the role play.
- Provide debriefing on the experience of the role players and observers, the relationship of the role play to the company context, and important learning points.

Sources: Based on S. Karve, "Setting the Stage for Effective Role Plays," *T+D* (November 2011), pp. 76–77; S. Thiagarajan, "Instructional Games, Simulations, and Role Plays." In *The ASTD Training and Development Handbook*, pp. 517–33.

Behavior Modeling

Behavior modeling presents trainees with a model who demonstrates key behaviors to replicate and provides trainees with the opportunity to practice the key behaviors. Behavior modeling is based on the principles of social learning theory (discussed in **Chapter Four**), which emphasize that learning occurs by (1) observation of behaviors demonstrated by a model and (2) vicarious reinforcement. **Vicarious reinforcement** occurs when a trainee sees a model receiving reinforcement for using certain behaviors.

Behavior modeling is more appropriate for teaching skills and behaviors than for teaching factual information or knowledge. Research suggests that behavior modeling is one of the most effective techniques for teaching interpersonal and computer skills.[49]

Table 7.8 presents the activities in a behavior modeling training session. These activities include an introduction, skill preparation and development, and application planning.[50] Each training session, which typically lasts four hours, focuses on one interpersonal skill, such as coaching or communicating ideas. Each session includes a presentation of the rationale behind the key behaviors, a video of a model performing the key behaviors, practice opportunities using role play, evaluation of a model's performance in the videotape, and a planning session devoted to understanding how the key behaviors can be used on the job. In the practice sessions, trainees are provided with feedback regarding how closely their behavior matches the key behaviors demonstrated by the model. The role-playing and modeled performance are based on actual incidents in the employment setting in which the trainee needs to demonstrate success.

TABLE 7.8 Activities in a Behavior Modeling Training Program

Introduction (45 mins.)
- Watch video that presents key behaviors.
- Listen to rationale for skill module.
- Discuss experiences in using skill.

Skill Preparation and Development (2 hrs. 30 mins.)
- View model.
- Participate in role plays and practice.
- Receive oral and video feedback on performance of key behaviors.

Application Planning (1 hr.)
- Set improvement goals.
- Identify situations in which to use key behaviors.
- Identify on-the-job applications of the key behaviors.

Well-prepared behavior modeling training programs identify the key behaviors, create the modeling display, provide opportunities for practice, and facilitate transfer of training.[51] The first step in developing behavior modeling training programs is to determine (1) the tasks that are not being adequately performed due to lack of skill or behavior and (2) the key behaviors that are required to perform the task. A **key behavior** is one of a set of behaviors that is necessary to complete a task. In behavior modeling, key behaviors are typically performed in a specific order for the task to be completed. Key behaviors are identified through a study of the skills and behaviors necessary to complete the task and the skills or behaviors used by employees who are effective in completing the task.

Table 7.9 presents key behaviors for a behavior modeling training program on problem analysis. The table specifies behaviors that the trainee needs to engage in to be effective in problem analysis skills. Note that the key behaviors do not specify the exact behaviors needed at every step of solving a problem. Rather, the key behaviors in this skill module specify more general behaviors that are appropriate across a wide range of situations. If a task involves a clearly defined series of specific steps that must be accomplished in a specific order, then the key behaviors that are provided are usually more specific and explained in greater detail. For example, tennis players learning how to serve must follow a detailed sequence of activities (e.g., align feet with the baseline, take the racquet back over the head, toss the ball, bring the racquet forward over the head again, pronate the wrist, and strike the ball). People learning interpersonal skills must develop more general key behaviors because there is always more than one way to complete the task. The development of general key behaviors promotes far transfer (discussed in **Chapter Five**). That is, trainees are prepared to use the key behaviors in a variety of situations.

Another important consideration in developing behavior modeling programs is the modeling display. The **modeling display** provides the key behaviors that the trainees will practice to develop the same set of behaviors. DVDs and online video are the predominant methods used to present modeling displays. In online behavior modeling training, the learner can practice the key behaviors by watching scenarios that mimic an

TABLE 7.9 Example of Key Behaviors in Problem Analysis

Get all relevant information by: • Rephrasing the question or problem to see if new issues emerge • Listing the key problem issues • Considering other possible sources of information Identify possible causes. If necessary, obtain additional information. Evaluate the information to ensure that all essential criteria are met. Restate the problem considering new information. Determine what criteria indicate that the problem or issue has been resolved.

interpersonal interaction. At certain points during the scenario, for example, when asked a question, the learner is asked to choose one of several choices of how they would respond. Just like in a real interpersonal interaction, they then see how the other person would react to their response. (The use of new technology in training is discussed in **Chapter Eight**.) Effective modeling displays have six characteristics:[52]

1. The display clearly presents the key behaviors. The music and the characteristics of the situation shown in the display do not interfere with the trainee seeing and understanding the key behaviors.
2. The model is credible to the trainees.
3. An overview of the key behaviors is presented.
4. Each key behavior is repeated. The trainee is shown the relationship between the behavior of the model and each key behavior.
5. A review of the key behaviors is included.
6. The display presents models engaging in both positive use of key behaviors and negative use (i.e., ineffective models not using the key behaviors).

Providing opportunities for practice involves (1) having trainees cognitively rehearse and think about the key behaviors and (2) placing trainees in situations (such as role plays) in which they have to use the key behaviors. Trainees may interact with one other person in the role play or in groups of three or more in which each trainee can practice the key behaviors. The most effective practice sessions allow trainees to practice the behaviors multiple times, involve a small group of trainees where anxiety or evaluation apprehension is reduced, and include other trainees who understand the company and the job.

Practice sessions should include a method for providing trainees with feedback to provide reinforcement for behaviors performed correctly, as well as information needed to improve behaviors. For example, if role play is used, trainees can receive feedback from the other participants who serve as observers when not playing the role. Practice sessions may also be videotaped and played back to the trainees. The use of video objectively captures the trainees' behavior and provides useful, detailed feedback. Having the trainees view the video shows them specifically how they need to improve their behaviors and identifies behaviors that they are successfully replicating.

Behavior modeling helps ensure that transfer of training occurs by using application planning. **Application planning** prepares trainees to use the key behaviors on the job (i.e., enhances transfer of training). Application planning involves having all participants prepare a written document identifying specific situations in which they should use the key behaviors. Some training programs actually have trainees complete a "contract" outlining the key behaviors that they agree to use on the job. The trainer may follow up with the trainees to see if they are performing according to the contract. Application planning may also involve preparing trainees to deal with situational factors that may inhibit their use of the key behaviors (similar to relapse prevention, discussed in **Chapter Four**). As part of the application planning process, a trainee may be paired with another participant, with the stated expectation that the two should periodically communicate with each other to discuss successes and failures in the use of key behaviors.

Group Building Methods

Group building methods are training methods designed to improve team or group effectiveness. A **team** refers to two or more people with specific roles or functions who work together with shared responsibility to achieve a common goal or mission or complete tasks in a company.[53] In group building methods, trainees share ideas and experiences, build group identity, understand the dynamics of interpersonal relationships, and get to know their own strengths and weaknesses and those of their coworkers. Group techniques focus on helping teams increase their skills for effective teamwork. A number of training techniques are available to improve work group or team performance, to establish a new team, or to improve interactions among different teams. All involve an examination of feelings, perceptions, and beliefs about the functioning of the team; discussion; and development of plans to apply what was learned in training to the team's performance in the work setting. Group building methods include adventure learning, team training, and action learning.

Group building methods often involve experiential learning. **Experiential learning** training programs have four stages: (1) gain conceptual knowledge and theory, (2) take part in a behavioral simulation, (3) analyze the activity, and (4) connect the theory and activity with on-the-job or real-life situations.[54]

For experiential training programs to be successful, several guidelines should be followed. The program needs to tie in to a specific business problem. The trainees need to be moved outside their personal comfort zones, but within limits so as not to reduce trainee motivation or ability to understand the purpose of the program. Multiple learning modes should be used, including audio, visual, and kinesthetic. When preparing activities for an experiential training program, trainers should ask trainees for input on the program goals. Clear expectations about the purpose, expected outcomes, and trainees' role in the program are important. Finally, the training program needs to be evaluated. Training programs that include experiential learning should be linked to changes in employee attitudes, behaviors, and other business results. If training programs that involve experiential learning do not follow these guidelines, they may be questioned. For example, the U.S. Postal Inspector resigned after criticisms surfaced about postal team training activities. Current and former postal employees complained to several U.S. senators about training activities that included having employees wrap each other in toilet paper, dress as cats, and hold signs that spelled "teamwork."[55]

Adventure Learning

Adventure learning is an experiential learning method that focuses on the development of teamwork and leadership skills through structured activities.[56] Adventure learning includes wilderness training, outdoor training, improvisational activities, drum circles, and even cooking classes. Adventure learning appears to be best suited for developing skills related to group effectiveness, such as self-awareness, problem solving, conflict management, and risk taking. Adventure learning may involve strenuous, challenging physical activities such as dogsledding or mountain climbing. Adventure learning can also use structured individual and group activities, such as wall climbing, rope courses, trust falls, ladder climbing, and traveling from one tower to another using a device attached to a wire that connects the two towers.

For example, "The Beam" requires team members to cross a six-foot-high beam placed between two trees, using help only from the team. Trainees can help by shouting advice and encouragement.[57] Rope-based activities may be held 3–4 feet or 25–30 feet above the ground. The high-ropes course is an individual-based exercise whose purpose is to help the trainee overcome fear. The low-ropes course requires the entire team of trainees to complete the course successfully. The purpose is to develop team identity, cohesiveness, and communication skills.

At RealScout, 20 coders, marketing executives, and product team members left their office and spent a day in the California mountains learning survival skills such as constructing shelters, purifying water, and starting a fire without matches.[58] The program cost $2,000 in addition to the $7,000 to $10,000 lost by shutting down the business for the day. RealScout executives believe the benefits of the adventure outweigh its costs. They believe it helps develop stronger teams, allows employees to better know each other even if they don't work together on a daily basis, and gives employees a fun experience that will aid in retention.

Adventure learning can also include demanding activities that require coordination but place less of a physical strain on team members. In drum circles, each team member is given a drum, and facilitators work with the team to create a drumming orchestra. Toyota spent $20,000 for drums to accommodate 40 people at its training center in Torrance, California.[59] Drum circles are held twice a week. Toyota believes that the drum circles are metaphors for how high-performance teams should operate: cooperatively and smoothly. Cooking Up Change is one of many team-building courses offered around the United States by chefs, caterers, hotels, and cooking schools.[60] These courses have been used by companies such as Honda and Microsoft. The idea is that cooking classes help strengthen communications and networking skills by requiring team members to work together to create a full-course meal. Each team has to decide who does what kitchen tasks (e.g., cooking, cutting, cleaning) and who prepares the main course, salads, and dessert. Often, team members are required to switch assignments in mid-preparation to see how the team reacts to change.

For adventure learning programs to be successful, the problems trainees encounter or should mimic serve as a metaphor for issues they are facing on the job (such as the need to help others, better communication among team members) and help to identify or develop the types of skills that participants need. Also, after the exercises, a skilled facilitator should lead a discussion about what happened in the exercise, what was learned, how events in the exercise relate to the job situation, and how to set goals and apply what was learned on the job.[61] DaVita HealthCare Partners provides kidney-related health-care services such as dialysis.[62] DaVita contracted with a training provider to develop a three-hour experiential learning activity that would be collaborative; have a sense of purpose; and reinforce the company's values of teamwork, fulfillment, and fun. The goals of the program were to understand the importance or why of work, understand how team members relate to patients and to each other, and learn how to address challenges. The training activity started with a discussion of the importance of communicating and collaborating for successful teamwork on the job. Employees were divided into three-member teams and given the task of building prosthetic hands, which would be donated to organizations serving amputees. Building the prostheses provided an opportunity for the achievement of the program goals. The employees built more than 14,000 prostheses during the three-hour activity! The activity concluded with a discussion of ways to apply what they learned to their jobs at DaVita.

This approach does have disadvantages, however. The physical demands of some types of adventure learning and the requirement that trainees often touch each other in the exercises may increase a company's risk for negligence claims due to personal injury, intentional infliction of emotional distress, and invasion of privacy. Also, the Americans with Disabilities Act (ADA) raises questions about requiring disabled employees to participate in physically demanding training experiences.[63]

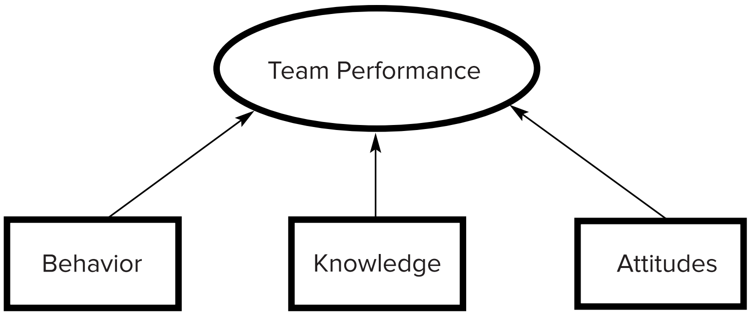
Given the physically demanding nature of adventure learning, it is important to consider when to use it instead of another training method. Adventure learning allows trainees to interact interpersonally in a situation not governed by formal business rules. This type of environment may be important for employees to mold themselves into a cohesive work team. Also, adventure learning exercises allow trainees to share a strong emotional experience. Significant emotional experiences can help trainees break difficult behavior patterns and open trainees to change their behaviors. One of the most important characteristics of adventure learning is that the exercises can serve as metaphors for organizational behavior. That is, trainees will behave in the same way in the exercises that they would when working as a team (e.g., developing a product launch plan). As a result, by analyzing behaviors that occur during the exercise, trainees gain insight into both positive and ineffective behaviors.

Does adventure learning work? Rigorous evaluations of its impact on productivity or performance have not been conducted. However, former participants often report that they gained a greater understanding of themselves and how they interact with co-workers.[64] One key to an adventure learning program's success may be the insistence that whole work groups participate together so that group dynamics that inhibit effectiveness can emerge and be discussed.

Team Training

Team training refers to training that is designed to improve team effectiveness. There are many different types of teams in companies, including production teams, service teams, committees, project teams, and management teams. Teamwork tends to be episodic.[65] That is, teams engage in a cycle of identifying their goals, engaging in interpersonal interactions, and taking actions to achieve their goals. They repeat this cycle as goals are reached and tasks are completed and they move on to new tasks or goals. Regardless of the type of team, successful team performance depends on the knowledge, attitudes, and behaviors of its members. **Figure 7.3** shows the three components of team performance: knowledge, attitudes, and behavior.[66] The behavioral requirement means that team members must perform actions that allow them to communicate, coordinate, adapt, and complete complex tasks to accomplish their objective. The knowledge component requires team members to have mental models or memory structures that allow them to function effectively in unanticipated or new situations. Team members' beliefs about the task and feelings toward each other relate to the attitude component. Team morale, cohesion, and identity are related to team performance. For example, in the military, as well as many areas of the private sector (e.g., nuclear power plants and commercial airlines), much work is performed by crews, groups, or teams. Successful performance depends on the coordination of individual activities to make decisions, team performance, and the readiness to deal with potentially dangerous situations (e.g., an overheating nuclear reactor). Research suggests that effectively trained teams develop procedures to identify and resolve errors, coordinate information gathering, and reinforce each other.[67]

FIGURE 7.3 Components of Team Performance

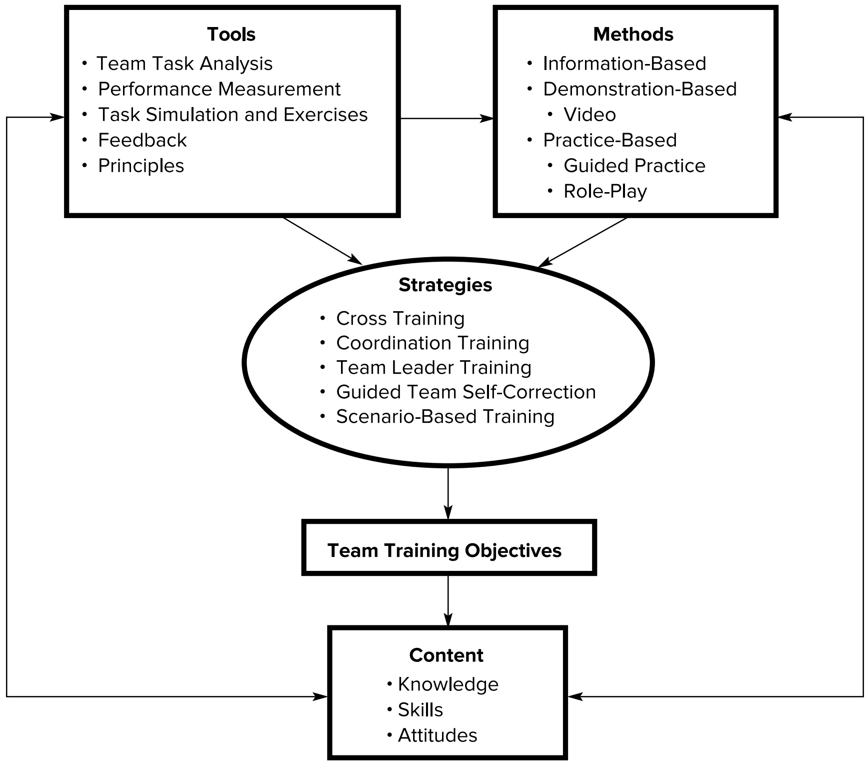


Source: Based on E. Salas and J. A. Cannon-Bowers, "Strategies for Team Training." In *Training for 21st-Century Technology: Applications of Psychological Research*, eds. M. A. Quinones and A. Dutta (Washington, D.C.: American Psychological Association, 1997), pp. 249–81.

Figure 7.4 illustrates the four main elements of the structure of team training (tools, methods, strategies, and team training objectives). Several tools help define and organize the delivery of team training.[68] These tools also provide the environment (e.g., feedback) needed for learning to occur. The tools work in combination with different training methods to help create instructional strategies. These strategies are a combination of the methods, tools, and content required to perform effectively.

The strategies include cross-training, coordination training, team leader training, scenario-based training, and guided team self-correction. **Cross-training** has team members understand and practice each other's skills so that members are prepared to step in and take the place of a member who may temporarily or permanently leave the team. Research suggests that most work teams would benefit from providing members with at least enough understanding of teammates' roles to discuss trade-offs of various strategies and behaviors that affect team performance.[69] **Coordination training** instructs the team in how to share information and decision-making responsibilities to maximize team performance. Coordination training is especially important for commercial aviation or surgical teams that are in charge of monitoring different aspects of equipment and the environment but must share information to make the most effective decisions regarding patient care or aircraft safety and performance. **Team leader training** refers to training that the team manager or facilitator receives. This may involve training the manager on how to resolve conflict within the team or helping the team coordinate activities or other team skills. **Scenario-based training** refers to training that places team members

FIGURE 7.4 **Main Elements of the Structure of Team Training**



Sources: Based on E. Salas and J. A. Cannon-Bowers, "Strategies for Team Training." In *Training for 21st-Century Technology: Applications of Psychological Research*, eds. M. A. Quinones and A. Dutta (Washington, D.C.: American Psychological Association, 1997), pp. 249–81; J. Cannon-Bowers and C. Bowers, "Team Development and Functioning." In *APA Handbook of Industrial and Organizational Psychology*, ed. S. Zedeck (Washington, D.C.: American Psychological Association, 2011), pp. 597–650.

in a realistic context while learning. This type of team training helps trainees experience the consequences of their actions, make adjustments, accomplish their tasks, and build team self-efficacy (i.e., the feeling that the team can successfully perform tasks). **Guided team self-correction** refers to training that emphasizes continuous learning and knowledge sharing in teams. In this type of training, team members observe each other's behavior and give and receive performance feedback.

Employees obviously need technical skills that can help the team accomplish its task. But team members also need skills in communication, adaptability, conflict resolution, and other teamwork issues.[70] Team training usually involves multiple methods. For example, a lecture or video may be used to disseminate knowledge regarding communication skills to trainees. Role plays or simulations may be used to give trainees the opportunity to put into practice the communication skills emphasized in the lecture. Regardless of the method chosen, opportunities for practice and feedback need to be included.

For example, Aquarius is an undersea laboratory used during the NASA Extreme Environment Mission Operations (NEEMO). The base, located several miles off the coast of Key Largo, Florida, is owned by the National Oceanic and Atmospheric Administration (NOAA) and managed by the University of North Carolina.[71] The NEEMO experience places astronauts in a challenging environment that parallels the hostile physical and stressful psychological environment experienced in long-duration missions. These challenges can include allowing the crew to experience the effects of gravity in space, on the moon, and Mars; providing a compressed timeline for completing tasks; practicing procedures such as spacewalks to repair or replace equipment and emergency procedures used to rescue crew members; and performing tasks with delayed and limited communications with the mission control crew. The NEEMO experience helps crew members develop important team processes, such as communication, coordination, performance monitoring and back-up behaviors, to successfully meet the challenges and perform the tasks they encounter, both in Aquarius and on their space missions.

Team training has helped the pilots in the cockpit of commercial airliners improve their communications with each other, reducing the number of accidents that have occurred. To further enhance passenger safety, United Continental Holdings, Inc. asked each of its pilots to attend an extra day of training.[72] The extra day of training focused on reducing the likelihood that generation gaps between more senior captains and younger and co-pilots or first officers might lead to poor communications and decision making. The training is intended to encourage veteran captains to mentor junior co-pilots by sharing their knowledge and experiences; teach captains how to request and respond to feedback from junior pilots; and help pilots with less seniority increase their confidence in communicating with more senior captains should they identify problems. The training is especially important because due to the retirement of more senior pilots, flight crews are younger and have less experience. United has hired thousands of new pilots who are being assigned to fly international routes without the same amount of supervised flying they historically would have received.

Action Learning

Action learning gives teams or work groups an actual problem, has them work on solving it and committing to an action plan, and then holds them accountable for carrying out the plan.[73] Companies use action learning to solve important problems, develop leaders, quickly build high-performance teams, and transform the organizational culture. **Table 7.10** shows the steps involved in action learning. Several types of problems are addressed in action learning, including how to change the business, better use technology, remove barriers between the customer and company, and develop global leaders. Typically, action learning involves between 6 and 30 employees. It may also include customers and vendors. There are several variations in the composition of the group. One variation is that the group includes a single customer for the problem being dealt with. Sometimes the group includes cross-functional representatives who all have a stake in the problem. Or the group may involve employees from multiple functions, with each employee focusing on their own functional problem and contributing to solving the problem identified. Employees are asked to develop novel ideas and solutions in a short period of time. The teams usually need to gather data for problem solving by visiting customers, employees, academics, and/or industry leaders. Once the teams have gathered data and developed their recommendations, they are required to present them to top-level executives.

TABLE 7.10 Steps in Action Learning

- Identification of the sponsors of action learning, including CEOs and top managers.
- Identification of the problem or issue.
- Identification and selection of the group who can address the problem.
- Identification of coaches who can help the group reframe the problem and improve its problem solving by listening, giving feedback, offering assumptions, and so on.
- Presentation of the problem to the group.
- Group discussion that includes reframing the problem and agreement on what the problem is, what the group should do to solve the problem, and how the group should proceed.
- Data gathering and analysis relevant to solving the problem, done by the group as a whole as well as by individual members.
- Group presentation on how to solve the problem, with the goal of securing a commitment from the sponsors to act on the group's recommendations.
- Self-reflection and debriefing (e.g., What have the group members learned? What might they have done differently?)

Sources: Based on P. Malone, "The Untapped Power of Action Learning," *T+D* (August 2013), pp. 54–59; M. Pedler and C. Abbott, *Facilitating Action Learning* (New York: McGraw-Hill, 2013).

Consider how University Health System and PepsiCo used action learning teams to provide solutions to urgent and complex business problems.[74] At University Health System, nine cross-functional teams of managers who otherwise would not work together worked on separate business problems. Example of these problems included how to increase patient satisfaction, how to reduce billing errors, and how to enhance inventory control. Each team was asked to present its solution to what was called "Shark Tank"—with three senior executives and the CEO for pediatric services serving as "sharks." As each team presented its ideas, the sharks provided coaching and feedback. The teams' solutions helped University Health System save millions of dollars and improve patient satisfaction. PepsiCo employed action learning when it wanted to train managers to take a global perspective on the company's strategy. Leslie Teichgraeber, who leads PepsiCo's training programs, observed that most managers were familiar with only their local or national markets. So she assembled teams of managers from various locations and assigned each team to solve problems related to business needs that had been identified by the heads of their units. At the end of nine months, they presented their ideas to PepsiCo executives.

Choosing a Training Method

As a trainer or manager, you will likely be asked to choose a training method. Given the large number of training methods available to you, this task may seem difficult. One way to choose a training method is to compare methods. **Table 7.11** evaluates each training method discussed in this chapter according to a number of characteristics. For example, the types of learning outcomes related to each method are identified. Also, for each method, a high, medium, or low rating is provided for each characteristic of the learning environment, for transfer of training, for cost, and for effectiveness.

TABLE 7.11 Comparison of Training Methods

	Presentation		Hands-On								Group Building		
	Lecture	**Video**	**OJT**	**Self-Directed Learning**	**Apprenticeship**	**Simulation**	**Case Study**	**Business Games**	**Role Play**	**Behavior Modeling**	**Adventure Learning**	**Team Training**	**Action Learning**
Learning Outcome													
Verbal information	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	No	No	No	No	No
Intellectual skills	Yes	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	Yes	No
Cognitive strategies	Yes	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Attitudes	Yes	Yes	No	No	No	No	No	No	Yes	No	Yes	Yes	Yes
Motor skills	No	Yes	Yes	No	Yes	Yes	No	No	No	Yes	No	No	No
Learning Environment													
Clear objective	Medium	Low	High	High	High	High	Medium	High	Medium	High	Medium	High	High
Practice	Low	Low	High	High	High	High	Medium	Medium	Medium	High	Medium	High	Medium
Meaningfulness	Medium	Medium	High	Medium	High	High	Medium	Medium	Medium	Medium	Low	High	High
Feedback	Low	Low	High	Medium	High	High	Medium	High	Medium	High	Medium	Medium	High
Observation and interaction with others	Low	Medium	High	Medium	High	High	High	High	High	High	High	High	High
Transfer of Training Cost													
Development	Medium	Medium	Medium	High	High	High	Medium	High	Medium	Medium	Medium	Medium	Low
Administrative	Low	Low	Low	Medium	High	Low	Low	Medium	Medium	Medium	Medium	Medium	Medium
Effectiveness	High for verbal information	Medium	High for structured OJT	Medium	High	High	Medium	Medium	Medium	High	Low	Medium	High

How might you use this table to choose a training method? The first step in choosing a method is to identify the type of learning outcome that you want training to influence. As discussed in **Chapter Four**, these outcomes include verbal information, intellectual skills, cognitive strategies, attitudes, and motor skills. Training methods may influence one or several learning outcomes. Research on specific learning methods has shown that for learning to be effective, the instructional method needs to match the desired learning outcome. For example, research on behavior modeling and role playing shows that these methods lead to positive results, but their effectiveness varies according to the evaluation criteria used.[75] This emphasizes that the particular learning *method* used to deliver learning is not what is most important. Rather, the choice of the learning method should be based on the desired learning outcomes and the features that facilitate learning and transfer of training. Once you have identified a learning method, the next step is to consider the extent to which the method facilitates learning and transfer of training, the costs related to the development and use of the method, and its effectiveness.

As was discussed in **Chapter Four**, for learning to occur, trainees should understand the objectives of the training program, training content should be meaningful, and trainees should have the opportunity to practice and receive feedback. Also, a powerful way to learn is through observing and interacting with others. As you may recall from **Chapter Five**, transfer of training refers to the extent to which training will be used on the job. In general, the more the training content and environment prepare trainees for use of learning outcomes on the job, the greater the likelihood that transfer will occur. As discussed in **Chapter Six**, "Training Evaluation," two types of costs are important: development costs and administrative costs. Development costs relate to the design of the training program, including costs to buy or create the program. Administrative costs are incurred each time the training method is used. These include costs related to consultants, instructors, materials, and trainers. The effectiveness rating is based on both academic research and practitioner recommendations.

Several trends in **Table 7.11** are worth noting. First, there is considerable overlap between learning outcomes across the training methods. Group building methods are unique because they focus on individual as well as team learning (e.g., improving group processes). If you are interested in improving the effectiveness of groups or teams, you should choose one of the group building methods (e.g., adventure learning, team training, or action learning). Second, comparing the presentation methods to the hands-on methods illustrates that most hands-on methods provide a better learning environment and transfer of training than do the presentation methods. The presentation methods are also less effective than the hands-on methods.

If you are not limited by the amount of money that can be used for development or administration, choose a hands-on method over a presentation method. The training budget for developing training methods can influence the method chosen. If you have a limited budget for developing new training methods, use structured OJT—a relatively inexpensive, yet effective, hands-on method. If you have a larger budget, you might want to consider hands-on methods that facilitate transfer of training, such as simulators. Keep in mind that many of the methods discussed in this chapter can be adapted for use in online learning, e-learning, and distance learning. These training methods are discussed in **Chapter Eight**.

If possible, you may want to use several different methods within a single training program to capitalize on the different strengths of each method for facilitating learning and transfer. For example, at Miami Children's Health System, training for new employees uses multiple methods to help them understand the organization's culture, feel comfortable, and learn about their new job.[76] Senior leaders interact with the new employees in a discussion of the organization's vision, mission, and values and the importance of their roles. Employees are assigned a "buddy" to help answer any questions they might have about the organization. New employees also attend courses, participate in simulations, and receive OJT.

Summary

Companies are using a variety of training methods to guide competency development and contextual learning. Although new technology such as social networks are being used by some companies for training delivery and instruction, most training is still conducted face to face with an instructor. This chapter discussed traditional face-to-face training methods, including presentation, hands-on, and group building training methods. Presentation methods (such as lecturing) are effective for efficiently communicating information (knowledge) to a large number of trainees. Presentation methods need to be supplemented with opportunities for trainees to practice, discuss, and receive feedback to facilitate learning. Hands-on methods get trainees directly involved in learning. Hands-on methods are ideal for developing skills and behaviors. Hands-on methods include on-the-job training (OJT), self-directed learning, apprenticeship, simulation, business games, case studies, role playing, and behavior modeling. These methods can be expensive to develop but incorporate the conditions needed for learning and transfer of training to occur. Group building methods such as team training, action learning, and adventure learning focus on helping teams increase the skills needed for effective teamwork (e.g., self-awareness, conflict resolution, and coordination) and help build team cohesion and identity. Group building techniques may include the use of presentation methods, as well as exercises during which team members interact and communicate with each other. Team training has a long history of success in preparing flight crews and surgical teams, but its effectiveness for developing management teams has not been clearly established.

Key Terms

70-20-10 model *291*

traditional training methods *293*

presentation methods *294*

lecture *294*

audiovisual instruction *296*

hands-on method *296*

on-the-job training (OJT) *296*

apprenticeship *297*

simulation *301*

case study *302*

business game *304*

role play *305*

behavior modeling *305*

vicarious reinforcement *305*

key behavior *306*

modeling display *306*

application planning *307*

group building method *308*

team *308*

experiential learning *308*

adventure learning *308*

team training *310*

cross training *311*

coordination training *311*

team leader training *311*

scenario-based training *311*

guided team self-correction *312*

action learning *312*

Discussion Questions

1. What are the implications of the 70-20-10 model for choosing a training method?
2. What are the differences between social contextual learning and guided competency development? Are both types of learning (and associated training methods) necessary? Explain.

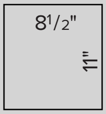
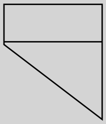
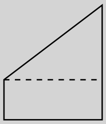
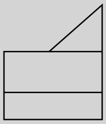
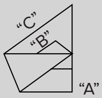
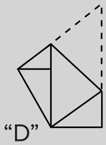
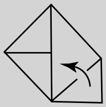
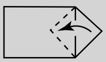
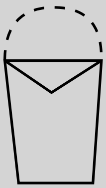
3. What are the strengths and weaknesses of the lecture, case study, and behavior modeling training methods?
4. If you had to choose between adventure learning and action learning for developing an effective team, which would you choose? Defend your choice.
5. Discuss the process of behavior modeling training.
6. How can the characteristics of the trainee affect self-directed learning?
7. What are the components of effective team performance? How might training strengthen these components?
8. **Table 7.11** compares training methods on a number of characteristics. Explain why simulation and behavior modeling receive high ratings for transfer of training.
9. What are some reasons why on-the-job training (OJT) can prove ineffective? What can be done to ensure its effectiveness?
10. Why are apprenticeship programs attractive to employees? Why are they attractive to companies?
11. Discuss the steps of an action learning program. Which aspect of action learning do you think is most beneficial for learning? Which aspect is most beneficial for transfer of training? Explain why and defend your choices.

Application Assignments

1. Choose a job with which you are familiar. Develop a self-directed learning module for a skill that is important for that job.
2. Go to www.sabrehq.com, the website for Sabre Corporate Development. Scroll over “Team Building” and select one of the team building events and review it. Discuss what you would do to ensure the success of the team building event you selected.
3. Reread the chapter opener and watch the promotion video on Ziegler Elevate Team Building and Leadership Academy at www.youtube.com/watch?v=0zC_CilamLY. What are the advantages and potential disadvantages of using this type of training program to build team skills?
4. Go to https://nols.edu/en, the website for NOLS, an organization that provides adventure learning. Review the courses and programs NOLS offers. Choose one of the courses and programs, and explain how it could be used for training and what skills it could help develop. For this type of training to be effective, what should be included in the program? What are the potential disadvantages of this type of training?
5. Divide into teams of two students. One student should be designated as a “trainer,” the other as a “trainee.” The trainee should briefly leave the room while the trainer reads the instructions for folding a paper cup. After the trainers have read the instructions, the trainees should return to the room. The trainers should then train the trainees in how to fold a paper cup (which should take about 15 minutes). When the instructor calls time, the trainers should note the steps they followed to conduct the training. The trainees should record their evaluations of the strengths and weaknesses of the training session (5–10 minutes). If time allows, switch roles.

SUPPLEMENT TO APPLICATION ASSIGNMENT 5

Steps and Key Points in Folding a Paper Cup:

	Steps in the Operation	Key Points
	Step: A logical segment of the operation in which something is done to advance the task.	Key point: Any directions or bits of information that help perform the step correctly, safely, and easily.
	Locate and place a 8 1/2” × 11” sheet of paper (standard printer or copier paper) in front of you.	1. Be sure that the surface is flat and free of interfering objects.
	Fold the lower-left corner up.	2. a. Line up the right edges. b. Make a sharp crease.
	Turn the paper over.	3. Pick up the lower-right corner with your right hand and place it at the top. (The folded flap should not be underneath.)
	Fold the excess lower edge up.	4. a. Line up the right edges. The fold should line up with the bottom edge. b. Make a sharp crease.
	Fold the lower-left corner flush with edge “A.”	5. a. Keep edges “B” and “C” parallel. b. Hold the bottom edge in the center with your finger while making the fold.
	Fold the upper corner to point “D.”	6. a. Hold the cup firmly with your left hand. b. Bring the upper corner down with your right hand.
	Separate the lower-right corner and fold back.	7. a. Hold the cup with your left hand. b. Fold back with your right hand. c. Make sharp creases.
	Turn the cup over and fold the remaining flap back.	8. Make sharp creases.
	Check the cup to be sure it will hold water.	9. Open the cup and look for holes and loose creases.

Source: Adapted from P. Decker and B. Nathan, *Behavior Modeling Training* (New York: Praeger Scientific, 1985).

Be prepared to discuss the training process and your reactions as a trainer or trainee. Also, be prepared to discuss the extent to which the training followed the steps for effective OJT.

6. Go to www.celemi.com, which features business simulations. Review one of the simulations. Describe the situation that the simulation is designed to represent. What elements in the simulation replicate the work environment? How could the simulation be improved to ensure that learning and transfer of training occur?
7. Watch the Wendy's training video, "Wendy's Training Video Chili Can Be Served with Cheese," on YouTube at www.youtube.com/watch?v=eOvHZDGK-kY. How is this video effective for helping staff learn how to serve Wendy's food to customers? What would you add to the video to increase its effectiveness?
8. Go to www.drumcafe.com, the website for Drum Cafe, a company that specializes in corporate team building through the use of drum circles. Review the website and answer the following questions:
    a. What are drum circles? What skills can participants develop?
    b. What recommendations would you make to a company that uses drum circles to train teams regarding how to ensure that transfer of training occurs?
    c. Do you think that drum circles are good for team training? Why or why not?
9. Go to www.vistpit.com, the website for PIT Instruction and Training, a company that provides training for auto racing pit crews as well as team training. Click on "Corporate Lean Training." Read about Lean Performance U. Watch the video provided on the website: "Pit Corporate Training Day." Watch the YouTube video of the training at www.youtube.com/watch?v=u6akX9THcrg and http://www.youtube.com/watch?v=VVQefr0bMNo.
    a. What should be done to ensure learning and transfer of training occurs?
    b. What skills can this type of training improve?
    c. How would you recommend evaluating the effectiveness of this program?
10. Go to www.ted.com, the website for TED, a nonprofit devoted to spreading ideas through short talks. TED stands for "Technology, Entertainment, and Design." Choose a TED Talk and watch it. Then, briefly describe the purpose and content of the talk. Next, consider the speaker. What did he or she do that held (or distracted) your attention?
11. Go to www.ajactraining.org/aviation-employers/how-it-works, which describes how the Aerospace Joint Apprenticeship Committee apprenticeship programs work. On-the-job training is an important part of the program. What steps should be included in effective on-the-job training for apprentices? List and briefly describe each step and its importance to the training process.
12. Watch the video about apprenticeships at www.youtube.com/watch?v=pl32Uyc3_ps. What are the unique characteristics that distinguish apprenticeships from other training methods? Can apprenticeships lead to a career? Explain.

Case: *Developing Leadership at Farm Bureau Financial Services*

Farm Bureau Financial Services provides its customers with liability insurance, auto insurance, home and property insurance, and life insurance Farm Bureau Financial Services wanted to develop a training program that could help employees develop six leadership competencies:

Building Trust (Confidence in others, gives others proper credit, follows through on agreed upon actions)

External Awareness (Understands conditions affecting the business and community engagement)

Innovative Thinking (Seeks opportunities for creative problem solving, considers outcomes not just quick solutions to problems)

Networking/Relationship (Encourages collaboration, can work with others through identifying a common interest, represents own interests but is fair to others)

Organizational Awareness (Understands Farm Bureau Financial Services mission, place in the community, and functions of work units)

Describe the methods or combination of training methods you would use to develop these competencies. Justify your choice of methods.

Sources: Based on K. Rieck and D. Kyle-Needs, "Developing High-Potential Talent at Farm Bureau Financial Services," *training* (March 2020), pp. 10–11; "Company Information," Farm Bureau Financial Services, from www.fbfs.com/about-us/company-informatio n, accessed January 23, 2021.

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CHAPTER EIGHT

Technology-Based Training Methods

Objectives

After reading this chapter, you should be able to

8-1 Explain how new technologies are influencing training.
8-2 Evaluate a web-based training site.
8-3 Explain how learning and transfer of training are enhanced by new training technologies.
8-4 Explain the strengths and limitations of e-learning, mobile learning training methods (such as iPads), and simulations.
8-5 Explain the different types of social media and the conditions conducive to their use for training.
8-6 Describe to a manager the different types of distance learning.
8-7 Recommend what should be included in an electronic performance support system.
8-8 Compare and contrast the strengths and weaknesses of traditional training methods versus those of technology-based training methods.
8-9 Identify and explain the benefits of learning management systems.

Using Technology Makes Learning Easier Infosys

Infosys, a global information technology and outsourcing services firm, created Lex, a user-friendly learning platform that offers thousands of courses and content internally developed as well as purchased from training vendors. The content offered on Lex is chosen based on current needs of the business and skills that employees will need now and in the future. If employees know what they want to learn, they can use Lex to search for topics and course titles and even create a learning playlist they can revisit. Employees who do not know what they want to learn can rely on artificial intelligence built into Lex to provide them with recommendations based on their current job, their training history or interests, and what others in similar jobs or interests have taken. Employees also have access to learning roadmaps linked to specific jobs, positions, or types of projects to help them identify what they want to learn. Lex also provides a virtual development tool where employees can access software to practice a skill. More than 10,000 employees use Lex every day for about 40 minutes. After completing a course or set of content, employees receive a digital badge that they can put on their social profile. Managers and peers review employees' badges to identify who to put on client project teams based on the skills needed. Infosys believes Lex has helped create a culture of continuous learning by making training fun and competitive (employees strive to acquire more badges than colleagues), and contributing to employees career development. Lex has also helped Infosys develop new business as employees gain the skills they can use to help clients deal with contemporary technology issues.

Sources: Based on S. Gale, "The Success of Lex," *Chief Learning Officer,* April 2019, pp. 56–57; "Infosys Launches Wingspan, a Transformational Learning Solution for Enterprises," from infosys.com/newsroom, accessed January 26, 2021.

Introduction

As the opening vignette illustrates, technology is having a major influence on how training is delivered. Infosys is using technology to make it easier for employees to find and participate in learning on topics they are interested in or need for their current job or future career. Infosys's learning platform allows employees to access training any time or any place, which helps overcome the cost and time challenges related to trying to bring employees together in one physical location for training. The effective development and use of technology for delivering training such as online learning requires collaboration among the areas of training, information technology, and top management. In addition, needs assessment, design, transfer, and evaluation (training design) are critical components of the effective use of technology-based training. The use of technology for training delivery and instruction offer exciting capabilities and possibilities. However, it is critical that companies use training technologies that support both business and learner needs.

As was discussed in **Chapter One**, technology-based training methods are part of the movement toward digital learning. This allows employees to personalize their learning (choose how, when, and what to learn) and integrate it into the flow of their work. Due to job demands, employees often do not have the time to find or attend classes and small companies have difficulty funding formal off-site training courses.[1] Digital learning includes employees seeking information, knowledge, or skills on an as-needed basis using tools of their choice such as smartphones, tablets, and computers. Companies provide content through videos, games, simulations, microlearning, chatbots, and artificial intelligence that employees can access. For example, employees can be given access to portals that recommend courses and show what other employees in their business function are using for learning. Vendors such as Skillsoft and LinkedIn Learning provide the opportunity for employees to pinpoint courses that will advance their skill in a specific area of expertise. Short training modules for machine maintenance, manufacturing processes, or safety are available that take 15 minutes or less to complete and include activities built in to employees' schedules to apply what they have learned. Also, technologies such as augmented reality can provide employees with on-the-job performance support.

As we discussed in **Chapter Seven**, "Traditional Training Methods," instructor-led classroom training is still the most popular training method. However, the use of technology for training delivery and instruction is increasing and anticipated to grow in the future. **Table 8.1** provides a snapshot of the use of new technology in training. The use of training technologies is expected to increase dramatically in the next decade as technology improves; the cost of technology decreases; companies recognize the potential cost savings of training via tablets, mobile phones, and social media; and the need for customized training increases.[2] As you will see later in this chapter, new training technologies are unlikely to totally replace face-to-face instruction. Rather, face-to-face instruction will be combined with new training technologies (a combination known as *blended learning*) to maximize learning.

The availability and use of social media such as Twitter and Facebook are influencing training and learning. These tools are used by many people in their daily lives. Many companies are using these tools for recruiting new employees and marketing and developing products and services. These tools are also increasingly being used for learning. Social media tools reshape learning by giving employees access to and control of their own learning through relationships and collaborations with others. Shared workspaces, social networks, and wikis are the most commonly used social media for learning.[3]

This chapter begins by discussing the influence of new technology on training delivery, support, and administration. How technology has changed the learning environment also is addressed. Next, the chapter explores computer-based training, online learning, and e-learning. E-learning emphasizes learning through interaction with training content, sharing with other trainees, and using Internet resources. The use of technologies, including social media, tablets such as iPads, and mobile smartphones, for training delivery and instruction are introduced. Next, the use of expert systems, intelligent tutoring systems, artificial intelligence, and augmented reality as training methods and for on-the-job performance support is discussed. The chapter

TABLE 8.1 Use of New Technology in Training

23% of learning hours used were delivered in virtual classrooms and 29% are delivered online.

47% of companies report that employees regularly used tablets and 41% reported that employees frequently used smartphones to access online learning.

Technology-based methods accounted for 56% of learning hours used in 2019.

Games are used by 29% of companies. 37% plan to begin using them.

84% of companies use learning management systems.

17% of large companies currently are using virtual reality and artificial intelligence and 6% are using augmented reality. 10% or less of small- and midsize companies are using virtual reality and 5% or less are using artificial intelligence and augmented reality.

Sources: Based on Based on M. Ho, *2020 State of the Industry: Talent Development Benchmarks and Trends* (Alexandria, VA: Association for Talent Development, 2020); "2020 Training Industry Report," *training*, November/December 2020, pp. 22–37; A. Moore, *Effective Trainers: Traditional and Virtual Classroom Success* (Alexandria, VA: Association for Talent Development, 2020); A. Moore, *E-learning: The Evolving Landscape* (Alexandria, VA: Association for Talent Development, 2020).

also shows how learning management systems aid in the delivery and administration of training programs. The last section of the chapter compares the various technology-based training methods. A blended learning approach combining traditional face-to-face and technology-based training methods may be the best way to capitalize on the strengths of available training methods.

Technology's Influence on Training and Learning

Chapters One and **Two** discussed the role that training and development should play in helping companies execute their business strategy and deal with forces influencing the workplace. For training to help a company gain a competitive advantage, it needs to support business goals and be delivered as needed to geographically dispersed employees who may be working at home or in another country. Training costs (such as travel costs) should be minimized and maximum benefits gained, including learning and transfer of training. For learning and transfer to occur (i.e., for the benefits of training to be realized), the training environment must include learning principles such as practice, feedback, meaningful material, and the ability to learn by interacting with others.

Technologies used in digital learning have made it possible to reduce the costs associated with delivering training to employees, increase the effectiveness of the learning environment, and ensure that training contributes to business goals. **Table 8.2** lists, describes, and provides examples of some of the technology training methods discussed in this chapter.

TABLE 8.2 Technologies Used for Training

E-learning, Online Learning, Computer-Based Training (CBT), Web-Based Training (WBT)
Training delivered using a computer or the web. Can include CDs or DVDs of text and/or video.
Webcasts/Webinars
Live web-based delivery of instruction to trainees in dispersed locations.
Podcasts
Web-based delivery of audio and video files.
Mobile Learning
Delivery of training through handheld mobile devices such as smartphones or tablet computers.

Blended Learning
Training approach that combines technology and face-to-face instructional delivery, such as classroom and WBT.
Wikis
Websites that allow many users to create, edit, and update content and share knowledge.
Distance Learning
Training delivered to trainees in other locations either online or through webcasts or virtual classrooms, often supported with communications tools such as chat, e-mail, and online discussions.
Social Media
Online and mobile technology used to create interactive communications allowing the creation and exchange of user-generated content. Includes wikis, blogs, networks such as Facebook, MySpace, and LinkedIn, microsharing sites such as Twitter, and shared media such as YouTube.
Shared Workspaces
A space hosted on a web server where people can share information and documents, such as Google Docs.
RSS Feeds
Updated content sent to subscribers automatically instead of by e-mail.
Blogs
A webpage where an author posts entries and readers can comment, such as WordPress.
Chat Rooms and Discussion Boards
An electronic room or message board on which learners communicate. Communications between learners can occur at the same or different times. A facilitator or instructor can moderate the conversations, which may be grouped by topic.
Microblogs or Microsharing
Software tools that enable communications in short bursts of text, links, and multimedia, either through stand-alone applications or through online communities or social networks, such as Twitter.
Massive Open Online Courses (MOOC)
Learning that is designed to enroll a large number of learners (massive); is free and accessible to anyone with an Internet connection (open); takes place using videos of lectures, interactive coursework including discussion groups, and wikis (online); and has specific start and completion dates, quizzes and assessments, and exams (courses).
Adaptive Training
Training that customizes the content presented to the trainee based on his or her needs.
Machine Learning
Technology that applies algorithms to data to identify user trends and patterns that inform future suggestions and data searches.
Augmented Reality (AR)
Allows trainees to see the physical world around them but their view includes virtual media.
Artificial Intelligence (AI)
A system such as a computer, a computer-controlled robot, or software that thinks intelligently like humans.

Sources: Based on N. Kroc, "Reality Reboot," *HR Magazine,* October 2017, pp. 46–51; D. Zielinski, "Get Intelligent on AI," *HR Magazine,* November 2017, pp. 60–61; S. Gale, "Ready or Not, the Future Is Now," *Chief Learning Officer,* March 2017, pp. 20–21; R. High, "3 Terms All Business Professionals Need to Understand," *VentureBeat,* February 24, 2018, from https://venturebeat.com, accessed March 7, 2018; R. Johnson and H. Gueutal, *Transforming HR Through Technology* (Alexandria, VA: SHRM Foundation, 2010); American Society for Training and Development, *Transforming Learning with Web 2.0 Technologies*, 2010 survey report; T. Bingham and M. Conner, *The New Social Learning* (Alexandria, VA: American Society for Training and Development Press, 2010); A. Kaplan and M. Haenlein, "Users of the World Unite! The Challenges and Opportunities of Social Media," *Business Horizons* 53 (2010), pp. 59–68; T. Poeppelman, E. Lobene, and N. Blacksmith, "Personalizing the Learning Experience through Adaptive Training," *The Industrial-Organizational Psychologist,* April 2015, from www.siop.org.; R. Grossman, "Are Massive Open Online Courses in Your Future," *HR Magazine,* August 2013, pp. 30–36

These technologies have influenced the delivery of training, training administration, and training support. Technology has made possible several benefits of digital learning:[4]

- Employees can gain control over when and where they receive training.
- Employees can access knowledge and expert systems on an as-needed basis.
- Through the use of avatars, virtual reality, and simulations, the learning environment can look, feel, and sound just like the work environment.
- Employees can choose the type of media (print, sound, video, etc.) that they want to use in a training program.
- Course enrollment, testing, and training records can be handled electronically, reducing the paperwork and time needed for administrative activities.
- Employees' accomplishments during training can be monitored.
- Traditional training methods, such as classroom instruction and behavior modeling, can be delivered to trainees rather than requiring them to come to a central training location.

Three of the most important ways that technology has influenced training and learning are: (1) it provides for greater collaboration, (2) it creates a more dynamic learning environment, and (3) it enhances learner control.[5]

Technology Facilitates Collaboration

Technology allows digital collaboration to occur. **Digital collaboration** is the use of technology to enhance and extend employees' abilities to work together regardless of their geographic proximity.[6] Digital collaboration includes electronic messaging systems; electronic meeting systems; online communities of learning organized by subject, where employees can access interactive discussion areas and share training content and web links; social networks; and document-handling systems with collaboration technologies that allow interpersonal interaction. Personal computers, tablet, or smartphones with a web browser or app are used for digital collaboration. Communication among users can be either synchronous or asynchronous.[7] In **synchronous communication**, trainers, experts, and learners interact with each other live and in real time, the same way they would in face-to-face classroom instruction. Technologies such as video teleconferencing and live online courses (virtual classrooms) make synchronous communication possible. **Asynchronous communication** refers to non-real-time interactions. That is, persons are not online and cannot communicate with each other without a time delay, but learners can still access information resources when they desire them. E-mail, self-paced courses on the web or on CD-ROM, discussion groups, and virtual libraries allow asynchronous communication.

Technology Creates a Dynamic Learning Environment

As discussed in **Chapter Seven**, learning can be an instructor-driven primary process. That is, instructors present information to the learners, and practice and applications occur after instruction is completed. Many learning environments include only the instructor or trainer and the learners. The trainer is responsible for delivering content, answering questions, and testing learning. Trainees play a passive role in learning. Communication on course content is one-way—from the instructor to the learner. Experts and resource materials are separate from the learning environment. Accessing resource materials and experts beyond the instructor and course materials assigned for the course requires learners to go outside the formal learning environment. Also, learners often have to wait to access resource materials and experts until instruction is completed. Interaction among learners occurs primarily outside the training room and tends to be limited to those who work in the same geographic area.

Technology has allowed learning to become a more dynamic process. As shown on the right-hand side of **Figure 8.1**, the use of technology creates digital learning that allows for greater interaction between learners and the training content, as well as between learners and the instructor. The trainer may help design the instruction, but the instruction is delivered to the learners primarily through online learning or simulations accessed using digital devices. The instructor becomes more of a coach and resource person available to answer students' questions and is less involved in the delivery of content. Learning occurs primarily through exchanges with other learners; the use of blogs, wikis, or other types of social media training; working on virtual team projects; participating in games, listening, exchanging ideas, and interacting with experts (engineers, managers, etc.); and discovering ideas and applications using hyperlinks that take the learner to other websites. Experts and resource materials may be part of the learning environment. While learners interact with the training content through exercises, applications, and simulations, they can discuss what they are learning with other learners or access experts or resource materials available on the Internet. Training delivery and administration (e.g., tracking learner progress) is all done through a learning management system (discussed later in the chapter). In the blended learning environment, shown at the bottom of **Figure 8.1**, trainees have access to a blended training curriculum that consists of both online and classroom instruction. Collaboration can occur between learners, between learners and training content (e.g., simulation or game), between learners and instructors, and between learners and experts. It is important that new technologies create a dynamic learning environment, including collaboration, active learner involvement, and access to other resources. A dynamic learning environment likely includes the use of Web 3.0 technologies. **Web 3.0** technologies include artificial intelligence, machine learning, and training content accessed by multiple devices all connected to the internet.[8] Also, Web 3.0 technologies provide the ability to share and access content using web searches based on natural language rather than keywords, symbols, or numbers.

For example, at IBM employees interact with Myca (My Personal Career Advisor) to answer questions about their careers, get job recommendations, identify new career paths, and identify training programs that fit their interests.[9] Myca has artificial intelligence and uses natural language processing and machine learning to have a conversation with employees. Myca becomes acquainted with each employee through reviewing their resume, job history at IBM, and any other important work and educational experiences they submit in their personal profile.

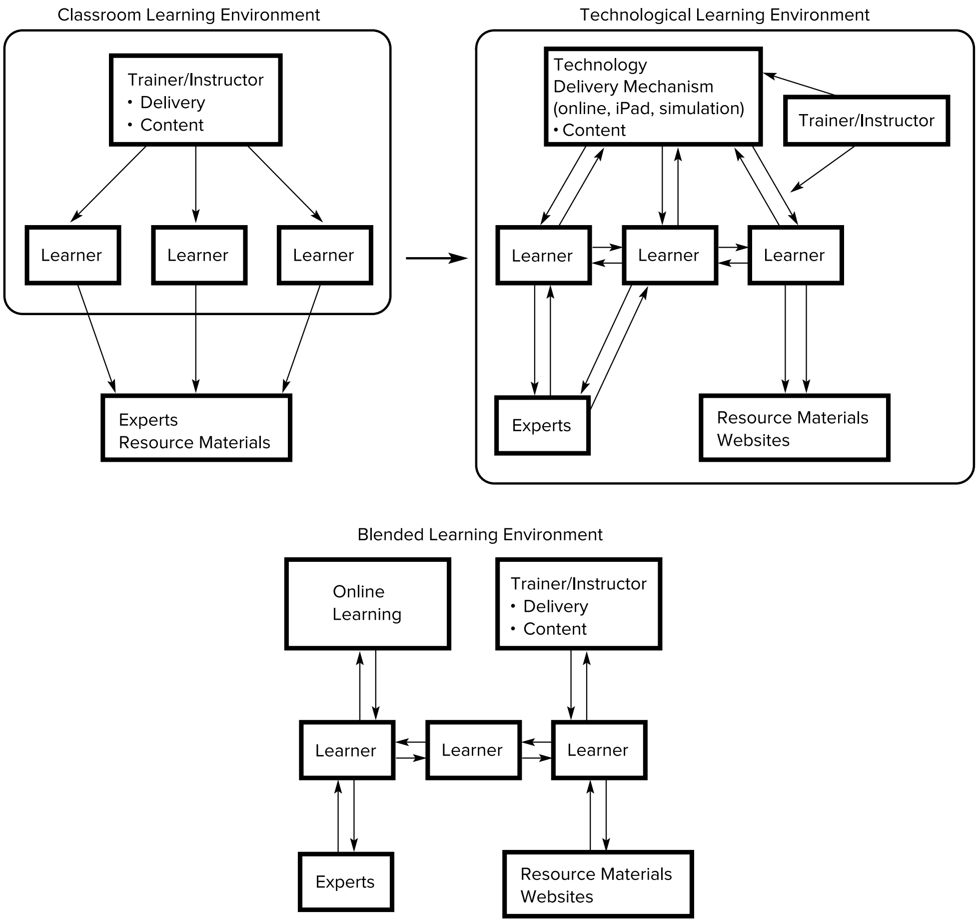
Technology Gives Learners Control

Learner control refers to giving trainees the option to learn through self-pacing exercises, exploring links to other material, and engaging in conversations with trainees and experts. It includes the ability to select how content is presented (e.g., text, pictures, videos, etc.), to pause, skip, and review content, and to link to additional resources. That is, online learning allows activities typically led by the instructor (presentation, slides, videos, visuals) or trainees (discussions, questions), as well as group interaction (discussion of application of training content) to be incorporated into training without trainees having to be physically present in the training room. Technologies enable trainees to access learning anytime and anywhere, including home, work, or even on the beach! Training content can be delivered in a consistent manner to trainees, who can decide when and where to participate.

Many of the training methods discussed in this chapter have these features. For example, online learning, or e-learning, includes instruction and delivery of training using the Internet or web. Distance learning and virtual classrooms involve videoconferencing and/or computers for delivery of instruction from a trainer to trainees who are not in the same location as the trainer. Mobile technologies allow training to be delivered through smartphones, iPads, and notebook computers and allow trainees to tune in to training programs at any time or place. New training technologies allow for the use of multiple media, including text, graphics, video, and audio. This allows for learning content to be presented in multiple ways, appealing to trainee preferences and learning styles.

Consider how technology has influenced how training is delivered at Farmers Insurance Group.[10] Farmers uses a blended learning approach to deliver effective learning to its employees and insurance agents who are located across the United States. Farmers Insurance training programs integrate face-to-face instruction, print, online, video, audio, virtual simulations, and coaching. Technology is used for delivering knowledge, and instructor-led training is used for skills development. In the past five years the amount of learning delivered through instructor-led classroom-based training has dropped from 90 to 50 percent. The other 50 percent is online or informal learning. For example, Farmers Insurance is using various training methods to help its employees cope with the changes made in claims processing, ratings, billing, and product systems in support of the company's business strategy, which emphasizes customer experience, distribution, and product management excellence. Field managers are required to complete online training and webinars designed to provide the new knowledge they need. Then the managers receive instructor-led training, videos, and coaching guides.

FIGURE 8.1 **Types of Learning Environments**



Farmers Insurance is also using virtual classrooms, mobile learning, social networks, learning simulations, virtual reality, and artificial intelligence. While taking courses at the University of Farmers, learners can use electronic tablets to take notes, access websites and articles, and view videos. The video capabilities of the tablets allow instructors to record learners as they practice skills and then provide feedback and coaching. Also, the instructors can create learning materials such as iBooks with embedded videos. To help employees learn and practice important interpersonal skills, Farmers Insurance is using virtual reality (VR) and artificial intelligence (AI) to realistically simulate conversations with vendors and customers. The training scenarios use virtual environments, speech recognition, natural language processing, and realistic body language to simulate these conversations. To encourage learning outside of a formal classroom environment, Farmers developed iFarmers apps for customers, sales agents, and employees. The iFarmers customer app helps customers learn about different insurance products. An iClaims app gives customers access to input and manage their insurance claims. The iAgent app provides business-focused learning for sales agents. Farmers Insurance has also been experimenting with social networking for employees to collaborate, create, and share knowledge, as well as provide performance support. Some training programs are using the social network for collaborative exercises. Farmers's "Agency Insider" program allows learners to specify whether they want to use Twitter, Facebook, e-mail, or an RSS feed.

Claims adjusters at Farmers Insurance have to be trained on how to inspect homes that have been damaged in earthquakes, floods, tornadoes, and other disasters. Farmers is using VR to create different scenarios that are impossible to simulate in the company's existing training program. For example, the VR simulates a two-story home that's suffered water damage. Each scenario takes about 15 minutes to complete, and the different scenarios are presented randomly so that water leaks appear in different places for each trainee. Trainees working in the home have access to a digital tool that lets them tag problem toilets or hot water heaters. They can even use a "fake" iPad to call a plumber or contact the insurance agent when they feel they have identified all of the problems. The prospective claims adjusters are scored based on the problems they identify and the appropriateness of the action they take. The virtual training experience can be broadcast to a classroom where other claims adjusters can watch their fellow trainees perform live. The VR sessions also can be recorded and accessed by employees for review.

The next section of the chapter discusses training technologies, how they are used, and their potential advantages and disadvantages.

Computer-Based Training, Online Learning, Web-Based Training, and E-Learning

Computer-based training (CBT), online learning, e-learning, and **web-based training** refer to instruction and delivery of training by computer through the Internet or the web.[11] All of these training methods can enhance instruction by integrating text; interaction using simulations and games; video; collaboration using blogs, wikis, and social networks; and hyperlinks to additional resources. E-learning can include both synchronous and asynchronous elements. It is usually considered different from a virtual classroom in which the instructor rather than the trainee has control of the pace, content, and timing of learning.

Online learning, e-learning, and web-based training all include delivery of instruction using the Internet or web. The training program can be accessed using a password through the public Internet or the company's private intranet. There are many potential features that can be included in online learning to help trainees learn and transfer training to their jobs. For example, online programs that use video may make it an interactive experience for trainees. That is, trainees watch the video and then use the keyboard or touch the screen to answer questions, provide responses to how they would act in certain situations, or identify the steps they would take to solve a problem. Interactive video is especially valuable for helping trainees learn technical or interpersonal skills. Online learning can also include opportunities to collaborate with other learners through discussion boards, wikis, and blogs. We discuss more of the potential features and advantages of online learning next.

A recent survey provides some insights into how companies are using e-learning.[12] The most common element used in e-learning is non-interactive video. In fact, e-learning, which lacks branching, personalized, and adaptive elements and provides the same experience to every learner who completes it, was used at 87 percent of organizations. Mandatory and compliance training is the most used and most effective content area for e-learning. This is because these types of training have to be completed on a cyclical basis. For example, once or twice each year, employees are asked to complete the training at their discretion before an assigned date, and quizzes can be used to show that employees have learned the key points. Technical content (including processes and procedures) was the second most used and most effective content area for e-learning. The primary factors influencing companies use of e-learning include the need to better serve geographically dispersed learners, the lack of employees' time for instructor-led training, and its ease of use to meet compliance requirements. The primary barriers to effective e-learning include difficulty holding employees, managers, and leaders accountable for completing it and training staff lacking the knowledge and skills to design effective e-learning content.

Potential Features of Online Learning

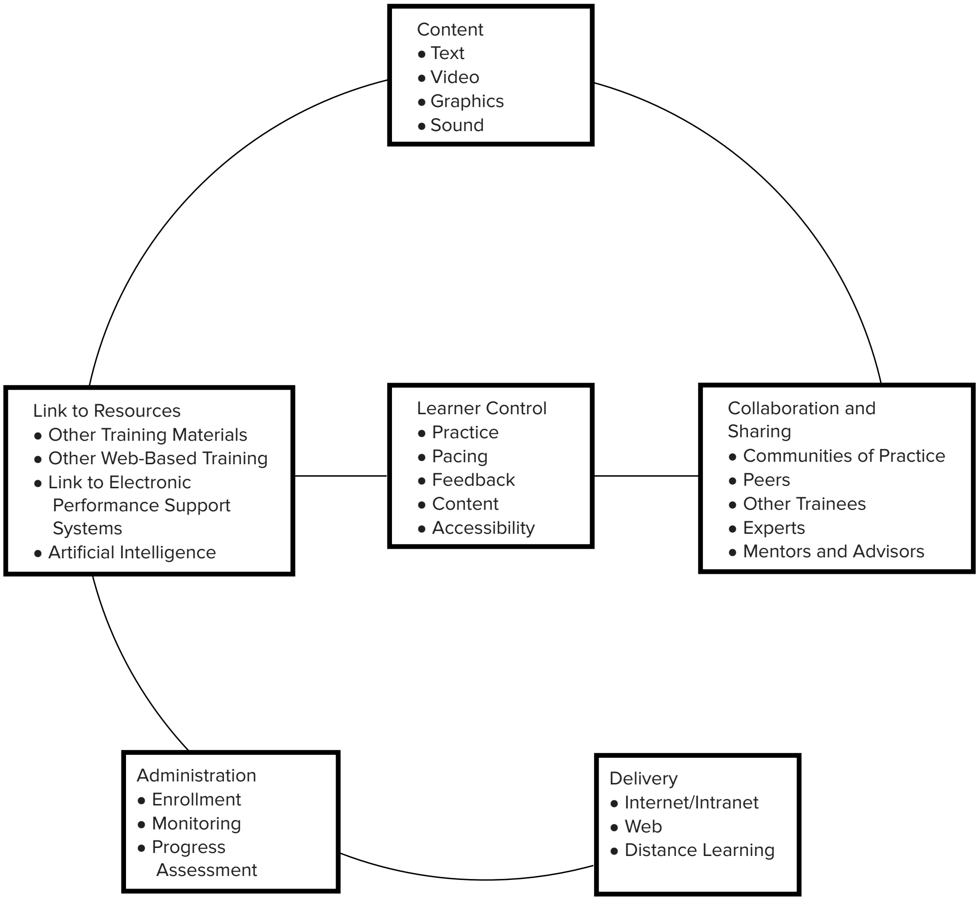
In online learning, it is possible to enable learners to interact with the training content and other learners and to decide how they want to learn.[13] **Figure 8.2** shows the possible features that can be built into online learning. These features include content, collaboration and sharing, links to resources, learner control, delivery, and administration. It is important to note that not all of these features are incorporated into online learning methods. One reason is that certain methods make it difficult to incorporate some of these features. For example, as you will see later in the chapter, distance learning that involves webconferencing may limit the amount of collaboration that takes place between trainees and the instructor. Also, in distance learning, trainees do not have control over the content, practice, and speed of learning. Another reason why a feature may not be incorporated is that the designers may have chosen not to include it. Although e-learning *can* include all the features to facilitate learning that are shown in **Figure 8.2**, it may fall short of its potential because, for example, program developers do not include opportunities for trainees to collaborate. As **Figure 8.2** shows, not only can online learning provide the trainee with content, but the ability to control what they learn, the speed at which they progress through the program, how much they practice, and even when they learn. In addition, online learning can allow learners to collaborate or interact with other trainees and experts and can provide links to other learning resources such as reference materials, company websites, and other training programs. Through a link with AI, it also can give learners recommendations of what they should learn or might be interested in learning, Text, video, graphics, and sound can be used to present course content. Also, simulations can be included in e-learning modules to engage learners.

For example, Beautycounter worked with a vendor to develop web-based training.[14] Before the web-based training was developed, Beautycounter distributed Word documents, PDFs, videos, and emails on its training website. Its sales consultants were frustrated because they did not know if they were reading the most current documents. The web-based training includes instructional and motivational videos, interactive activities, resource tools, and the ability to search and share learning modules. The learning modules can be "liked" and stored in a personal learning dashboard. LinkedIn Learning is a website offering thousands of video-based courses in several languages.[15] The topics include technical skills such as marketing with social media and using various kinds of software, as well as soft skills such as communication and time management. Data gathered from its users shape recommendations provided on courses on skills relevant to their careers. For more general recommendations, LinkedIn has also compiled playlists of courses on career themes such as starting a small business or retaining employees. Many companies are providing employees with access to LinkedIn Learning because of the number of courses provided, the variety of content, and its use of artificial intelligence to provide employees with training course recommendations based on their job title, completed courses, search history, and skills. Rosedin, an electrical construction services company, provides employees with competency maps that list the skills they need for their position. Each competency map provides recommendations to LinkedIn Learning content. Rosedin has found that LinkedIn Learning helps employees take greater control over their own training and engage in more training than if they just had the opportunity to take the courses the company offered.

Advantages of Online Learning

The possible features that can be built into online learning give it potential advantages over other training methods. The advantages of e-learning are shown in **Table 8.3**. E-learning initiatives are designed to contribute to a company's strategic business objectives.[16] E-learning supports company initiatives such as expanding the number of customers, initiating new ways to carry out business such as e-business (providing products

FIGURE 8.2 **Potential Features of E-Learning**



and services through the Internet), and speeding the development of new products or services. E-learning may involve a larger audience than traditional training programs that focus on employees. For example, e-learning may involve partners, suppliers, vendors, and potential customers.

TABLE 8.3 Advantages of E-Learning

- It supports the company's business strategy and objectives.
- It is accessible at any time and any place.
- The audience can include employees and managers, as well as vendors, customers, and clients.
- Training can be delivered to geographically dispersed employees.
- Training can be delivered faster and to more employees in a shorter period of time.
- Updating is easy.
- Practice, feedback, objectives, assessment, and other positive features of a learning environment can be built into the program.
- Learning is enhanced through the use of multiple media (sound, text, video, graphics, etc.) and trainee interaction.
- Paperwork related to training management (enrollment, assessment, etc.) can be eliminated.
- It can link learners to other content, experts, peers, and artificial intelligence.

Sources: Based on A. Moore, *E-learning: The Evolving Landscape* (Alexandria, VA: Association for Talent Development, 2020); D. Hartley, "All Aboard the E-Learning Train," *Training and Development,* July 2000, pp. 37–42; V. Beer, *The Web Learning Field Book: Using the World Wide Web to Build Workplace Learning Environments* (San Francisco: Jossey-Bass, 2000).

E-learning allows faster and more efficient delivery of training and reduces geographic and time constraints for employees' learning. Consider the advantages of e-learning for Apple Federal Credit Union and Total Quality Logistics.[17] Apple Federal Credit Union wanted to improve customer satisfaction and encourage its members to promote the organization. To help achieve this goal, the talent development team wanted to improve employees' retention rates of knowledge they acquired in two instructor-led courses: a problem-resolution course and a course focusing on effective communication and behavior styles. Apple Federal Credit Union recognized that without reinforcing what employees learned they often forget or lapse back to old behaviors within three weeks after completing the courses. The talent development team designed e-learning refresher modules to help employees retain and apply critical concepts. The 5–15 minute e-learning modules include animated videos, a maze game, knowledge checks, and quizzes taken during the last module of each course. Results show that over 98 percent of employees who have completed the e-learning modules have retained the knowledge emphasized in the courses. The company also saved thousands of dollars in offering the refreshers using e-learning rather than instructor-led training. After transitioning some of its training from live, instructor-led training to an online curriculum, Total Quality Logistics, a transportation and warehousing company, has realized instructional and process efficiencies that have saved nearly $4 million. In addition, the use of online learning has provided the company with the opportunity to provide more learning opportunities to a larger number of employees.

E-learning is also easy to update, thanks to user-friendly authoring tools such as Adobe Captivate. Changes can be made on the server that stores the e-learning program and employees worldwide can access the updated program. The administrative features of e-learning make training management a more efficient, paperless process. For example, CCH developed Shared Learning, an online administration module that allows companies to monitor employees' completion of e-learning. It tracks how many times employees complete the same class and how much time employees spend per class, and it bookmarks the point at which trainees leave an online class so they can enter the program at the place they left it when they resume training.[18]

Effectiveness of Online Learning

Is e-learning effective for all types of learning outcomes and trainees? Both research and company experiences suggest that e-learning is effective for a wide range of outcomes, including knowledge, skills, and behaviors.[19] **Table 8.4** shows some of the research results regarding the effectiveness of online learning compared to other training methods. Online learning may be most effective for training that emphasizes cognitive outcomes, such as declarative and procedural knowledge (recall the discussion of learning outcomes in **Chapter Four**, "Learning and Transfer of Training," and **Chapter Six**, "Training Evaluation").

TABLE 8.4 Research Results Regarding the Effectiveness of Online Learning

- Online instruction is more effective than face-to-face classroom instruction for teaching declarative knowledge (cognitive knowledge assessed using written tests designed to measure whether trainees remember concepts presented in training).
- Web-based instruction and classroom instruction are equally effective in teaching procedural knowledge (the ability of learners to perform the skills taught in training).
- Learners are equally satisfied with web-based and classroom instruction.
- Web-based instruction appears to be more effective than classroom instruction: (1) when learners are provided with control over content, sequence, and pace; (2) in long courses; and (3) when learners are able to practice the content and receive feedback.
- Web-based instruction and classroom instruction are equally effective when similar instructional methods are used (e.g., both approaches use video, practice assignments, and learning tests).
- The employees who get the most from online learning are those who complete more of the available practice opportunities and take more time to complete the training.
- E-learning is not effective for all learners, especially those with low computer self-efficacy.

Sources: Based on K. Kraiger, "Transforming Our Models of Learning and Development: Web-Based Instruction as Enabler of Third-Generation Instruction," *Industrial Organizational Psychology* 1 (2008), pp. 454–67; T. Sitzmann et al., "The Comparative Effectiveness of Web-Based and Classroom Instruction: A Meta-Analysis," *Personnel Psychology* 59 (2006), pp. 623–34; E. Welsh et al., "E-Learning: Emerging Uses, Empirical Results and Future Directions," *International Journal of Training and Development* 7 (2003), pp. 245–58.

Jiffy Lube offers 13 e-learning courses as part of its management certification program. These courses could be taught using face-to-face instruction, but Jiffy Lube believes that the content is easily communicated and understood in an interactive e-learning course.[20] However, learners at Jiffy Lube also encounter other topics that benefit from discussion, collaboration, role play, and problem solving, such as change management, performance management, and building a team, so they are trained using a combination of online learning and face-to-face instruction.

Online learning may facilitate greater social interaction between trainees than face-to-face learning methods because other trainees are equally accessible or more accessible than the instructor and there are more methods available that allow learners to interact, such as e-mail, blogs, wikis, and chat rooms.[21] Also, trainees may be more motivated to participate because they avoid feelings of inadequacy and low self-confidence, which can hinder participation in face-to-face learning. Delaware North Companies (DNC), a hospitality and food services company based in Buffalo, New York, provides hospitality and food services to national parks, stadiums, and airports. DNC delivers self-paced interactive training via the web, followed by virtual classes.[22] At DNC, soft skills, such as managing a team, effective communication techniques, delegation, empowerment, and conflict resolution, have been identified as best for online training. Functional and technical skills have been found to be best suited for on-the-job training (OJT).

In considering whether to move some or all training online, there are several things you should consider.[23] First, you should determine whether online training relates to business goals or employees' learning needs. Online training can save costs without compromising quality and provide access to learning for employees who have difficulties attending face-to-face training because of their schedules or locations. Moving training online likely will result in development costs related to designing or purchasing training and providing access. It is also important to consider if employees will be resistant to using online training because of personal preferences or lack of familiarity with training technology. If online training is developed, employees need to know why it is being used, how they can use it to meet their learning needs, how to find courses, and how to gain the most benefit from the courses offered.

Online learning may be valuable, but it may be insufficient for teaching complex analytical, conceptual, and interpersonal skills.[24] This may be because online learning lacks communication richness; some online learners may be reluctant to interact with other learners; and, although online learning increases accessibility to training, employees with busy work schedules have a greater opportunity to more easily delay, fail to complete, or poorly perform learning activities. Later in the chapter, we discuss how online learning can be combined with face-to-face instruction, known as blended learning, to take advantage of the strengths of both methods. Learning can be enhanced by combining face-to-face instruction and e-learning because learners are more engaged; the use of video, graphics, sound, and text is combined with active learning experiences such as cases, role playing, and simulations. Also, blended learning provides opportunities for learners to practice, ask questions, and interact with other learners and peers both face-to-face and online.

Developing Effective Online Learning

Table 8.5 provides tips for developing effective online learning.[25] The training design or ADDIE model discussed in **Chapter One**, "Introduction to Employee Training and Development," should still be used in designing e-learning. However, the emphasis at each stage should be slightly different.[26] Needs assessment, creating a positive online learning experience, learner control, and providing time and space for online learning are four central issues that need to be addressed for effective online learning, including web-based training.

Needs Assessment

Recall from **Chapter Three**, "Needs Assessment," that a needs assessment determines the company's resources for training and the tasks to be trained for, and it analyzes the employees who may need training. The needs assessment process for web-based training or any other type of online learning should include a technology assessment (as part of the organizational analysis) and an assessment of the skills that users need for online training (person analysis). This should include a technical analysis focused on identifying minimum computing requirements (e.g., bandwidth, memory, storage space, software, and processing speed). **Bandwidth** refers to the number of bytes and bits (information) that can travel between computers per second. Graphics, photos, animation, and video in courses can be slow to download and can "crash" the system. Online learning courses should be designed for the available bandwidth on the company's system. Bandwidth can be increased by upgrading access speed on the users' computers, buying and installing faster servers and switches (computer hardware) on the company's network, or encouraging trainees to access the web when demand is not high.[27] Trainees need to be able to access the browsers and connections they need to participate in e-learning and use all of the tools (e.g., e-mail, chat rooms, hyperlinks) that may accompany it as well as get technical support when needed. Online tutorials may be needed to acquaint trainees with the capabilities of the e-learning system and how to navigate the web.

The needs assessment should also identify the purpose of the online learning.[28] This helps to identify the type of online learning experience that is necessary. If the purpose is to increase awareness of a topic or communicate knowledge with limited resources, a solution involving providing trainees information though text, images, video, or audio, with simple assessment questions should be considered. Features such as drag-and-drop, sorting, matching questions, links to external resources should be included in online learning if more

TABLE 8.5 Tips for Developing Effective Online Learning

Needs assessment	Identify the connection between online learning and the needs of the business. Get management to buy in. Make sure that employees have access to technology and technology support. Consult with information technology experts about system requirements. Identify specific training needs (knowledge, skills, competencies, behaviors). If needed, train learners on computer and Internet basics.
Creating a positive learning experience	Incorporate learning principles (practice, feedback, meaningful material, an appeal to active learner involvement, and an appeal to multiple senses). Design the course for the available bandwidth (or increase the available bandwidth to suit the course needs). Use games and simulations, which are attractive to learners. Structure materials properly. Allow trainees the opportunity to communicate and collaborate with each other and with the trainer, experts, or facilitators. Make the program user-friendly: Learning modules should be kept short, the content should not overload trainees, and webpages should not be confusing. Provide incentives for completing training. Keep each instructional segment self-contained. "Chunk" training modules. Create smooth transitions between instructional segments. Any audio, video, or animation should be useful to the learner; otherwise, it is a waste of time and bandwidth. Provide the developer/producer with clear specifications regarding required file formats, maximum file sizes, window and image dimensions, navigation, screen fonts, and available bandwidth. Provide writers and instructional designers with clear guidelines for the maximum number of words per screen, how many interactive exercises to include, and which exercises are best suited to the content. Conduct a formative evaluation (pilot test) before large scale use of online learning.
Learner control	Provide learners with control, including the opportunity to skip sections or modules and the ability to pause, bookmark, review, and return to where they left off.
Provide time and space for online learning	Give learners dedicated training time to participate in online learning.

Sources: Based on K. Dobbs, "What the Online World Needs Now: Quality," *training*, September 2000, pp. 84–94; P. Galagan, "Getting Started with E-Learning," *Training and Development,* May 2000, pp. 62–64; D. Zielinski, "Can You Keep Learners Online?" *training,* March 2000, pp. 65–75; V. Beer, *The Web Learning Field Book: Using the World Wide Web to Build Workplace Learning Environments* (San Francisco Jossey-Bass, 2000); E. Zimmerman, "Better Training Is Just a Click Away," *Workforce,* January 2001, pp. 36–42; R. Clark and R. Mayer, *E-Learning and the Science of Instruction* (San Francisco: John Wiley, 2003); E. Salas, R. DeRouin, and L. Littrell, "Research-Based Guidelines for Designing Distance Learning: What We Know So Far," in *The Brave New World of eHR*, ed. H. Gueutal and D. Stone (San Francisco: Jossey-Bass, 2005), pp. 104–37; S. Boehle, "Putting the Learning Back into E-Learning," *training,* January 2006, pp. 29–35; A Rossett and L. Schafer, "What to Do about E-Dropouts," *T+D,* June 2003, pp. 40–46; M. Morrison, "Leaner E-Learning," *training,* January 2008, pp. 16–18; M. Allen, "The Return of Serious Design," *Chief Learning Officer,* July 2014, pp. 31–33.

participant interactivity is necessary to learn. If trainees need to have more dynamic experiences to meet the learning goals requiring content discovery, demonstration of concepts, or see the results of their decisions than online learning should consider including branching pathways, gamification, and interactive exercises and multimedia.

Creating a Positive Online Learning Experience

In the design and development phase, the characteristics of a positive learning environment discussed in **Chapters Four** and **Five** (e.g., objectives, practice, interaction) should be included to help aid retention of learning content and create a meaningful experience that motivates learners. Flowcharts or storyboards should be created that include all of the course components such as a main menu, modules, webpages for each lesson, assessments, discussion forums, images, color specifications, and help menus. Rapid prototyping should be used for designing the program.[29] **Rapid prototyping** refers to an iterative process in which initial design ideas are proposed and provided in rough form in an online working prototype that is reviewed and refined by design team members and key learning stakeholders. Watching how the users interact with the prototype provides feedback about how easy (or difficult) it is to navigate through the course and understand its contents, elements, and instructions. Also, multiple types of media should be chosen in order to appeal to different learning styles to the greatest possible extent. This includes text, animation, pictures, video, audio, games, simulations, and even e-books. E-learning should be designed to minimize content or work that is unrelated to the learning objectives. Extraneous content may take up trainees' limited cognitive processing resources, resulting in less learning. **Table 8.6** provides several design principles that should be considered to create a positive online learning experience.

TABLE 8.6 Principles for Creating a Positive Online Learning Experience

- Instruction includes relevant visuals and words.
- Text is aligned close to visuals.
- Complex visuals are explained by audio or text, rather than by both text and audio that narrates the text.
- Extraneous visuals, words, and sounds are omitted.
- Learners are socially engaged through conversational language agents.
- Key concepts are explained prior to the full process or task associated with the concepts.
- Prompts are provided that encourage self-regulation.
- Content is presented in short sequences over which learners have control.
- Activities and exercises that mimic the context of the job are provided.
- Explanations are provided for learner responses to quizzes and exercises.
- Exercises are distributed within and among the module(s) rather than in a single place.

Sources: Based on R. Clark and R. Mayer, "Learning by Doing: Evidence-Based Guidelines for Principled Learning Environments," *Performance Improvement* 47 (2008), pp. 5–13; R. Mayer, "Applying the Science of Learning: Evidence-Based Principles for the Design of Multimedia Instruction," *American Psychologist,* November 2008, pp. 760–69; R. Clark and R. Mayer, *E-Learning and the Science of Instruction*, 2d ed. (San Francisco: Jossey-Bass/Pfeiffer, 2008); T. Sitz Mann and K. Ely, "Sometimes You Need a Reminder: The Effects of Prompting Self-Regulation on Regulatory Processes, Learning, and Attrition," *Personnel Psychology* 95 (2010), pp. 132–44.

Remember that just putting text online isn't necessarily an effective way to learn. **Repurposing** refers to directly translating an instructor-led, face-to-face training program to an online format. Online learning that merely repurposes an ineffective training program will still result in ineffective training. Unfortunately, in their haste to develop online learning, many companies are repurposing bad training. The best e-learning uses the advantages of the Internet in combination with the principles of a good learning environment. Effective online learning takes advantage of the web's dynamic nature and ability to use many positive learning features, including linking to other training sites and content through the use of hyperlinks, providing learner control, and allowing the trainee to collaborate with other learners. Effective online learning uses video, sound, text, and graphics to hold learners' attention and provides trainees with meaningful content related to realistic on-the-job activities, relevant examples, and the ability to apply content to work problems and issues.

Also, trainees have opportunities to practice and receive feedback through the use of problems, exercises, assignments, and tests.

One way to help create a positive online learning experience is through the use of scenarios that present a real problem or work-related situation that the learner is asked to solve.[30] The use of scenarios can help develop critical thinking skills such as troubleshooting or identifying customer needs. Other benefits of using scenarios include: they help increase the meaningfulness of e-learning because they are relevant to learners' jobs; they offer an opportunity for learners to practice their skills dealing with a variety of situations and problems without risk; and, for mandatory training such as for sexual harassment, they may increase learners' motivation to learn compared to programs that just involve reviewing policies and procedures.

To ensure that materials are not confusing or overwhelming to the learner, online learning content needs to be properly arranged.[31] An orientation to the new program should be provided to learners to explain how to learn online, how to get help, and how to interact with peers, trainers, and facilitators.[32] Participants should be provided with an overview of the course or program and success factors for completion. After the e-learning program is implemented, the focus should shift to how to best distribute, maintain, update, and improve it. Evaluation should involve collecting some combination of reaction, learning, behavior, and results outcomes, including an emphasis on questions related to the number and quality of interactive exercises and multimedia and the ease of use of the navigation tools. Materials in online learning need to be organized in small, meaningful modules of information. Each module should relate to one idea or concept. The modules should be connected in a way that encourages the learner to be actively involved in learning. Active involvement may include asking trainees to find resources on the Internet, try quizzes or games, choose between alternative actions, or compare what they know to the knowledge of an expert or model. Objectives, videos, practice exercises, links to material that elaborates on the module content, and tests should be accessible within each module. The modules should be linked in an arrangement that makes sense, such as by importance or by the order in which content has to be learned (prerequisites). Finally, trainees should be able to skip over material with which they are familiar or in which they are competent, based on a test of the content, or return to modules for more practice.

Learner Control

As mentioned earlier in the chapter, learner control refers to giving trainees the option to learn actively though self-pacing exercises, exploring links to other material, and having conversations with other trainees and experts. Simply providing learner control does not ensure that trainees will use all the features provided by online learning (e.g., practice exercises).[33] Trainees should have access to instructions on how to use learner control tools, or else difficulty using them will take away from time and attention that they can devote to learning. Companies must communicate the importance and meaningfulness of the training content for employees' jobs and must hold employees accountable for completing the training.

For example, the Janssen Pharmaceutical Companies of Johnson & Johnson develop and sell drugs to treat and cure diseases such as COVID-19, cancer, Alzheimer's, and HIV.[34] Salespersons need to learn about drugs and other products before they can sell them to doctors, pharmacies, and hospitals. The quicker that salespersons are trained on new drugs, the sooner patients can gain access to them. Because they are located around the world and often on the road, salespersons don't have time to learn in a classroom environment. To facilitate a culture of learning, Janssen relies on digital learning that allows employees the opportunity to access information on products when and where they need it. For example, before the company introduced a new diabetes drug, it had to train 2,000 salespersons in less than two months. Using a virtual classroom, Janssen was able to provide training four days after the drug received government approval. Other sales training, including video case studies and podcasts, has been delivered using iPads and other mobile devices. Janssen also provides employees with a performance support tool, known as "YouLearn," that allows them to acquire skills and knowledge on their own time. Janssen ensures that technology-delivered learning is in sync with the employees' and the company's learning needs through in-person coaching and development planning. Managers are required to have at least five development conversations with employees each year, and each employee completes an individual development plan.

Research provides several recommendations for maximizing the benefits of learner control.[35] Training programs should not allow trainees to control the amount of feedback they receive because they may rely too much on the feedback, reducing their long-term retention of the training material. The program should offer practice on each topic repeatedly throughout the program so that trainees will not forget topics they have already completed. The program should provide practice to trainees using different examples to help the transfer of training content (skills or knowledge) to not only the full range of situations they may encounter on the job, but also to unexpected situations. Trainees should be allowed to control the sequence in which they receive instruction but not be able to skip practice. Prompting self-regulation improves performance in online training. As was discussed in **Chapter Four**, **self-regulation** refers to the learner's involvement with the training material and assessing their progress toward learning. Online prompts that ask trainees to recall key points or to set goals to help them use and remember the content after the course will help trainees remember the key principles/objectives presented in training and how to apply their knowledge and skills.

Provide Time and Space for Online Learning

Using formative evaluation of prototypes of web training can be helpful in identifying the appropriate length and time of modules (formative evaluations were discussed in **Chapter Six**). End users (managers, potential trainees) should be involved in a formative evaluation to ensure that music, graphics, icons, animation, video, and other features facilitate rather than interfere with learning. Also, end users need to test the content, the navigator, and the site map to guarantee that they can easily move through the learning module and access resources and links to other websites as needed. Online learning blurs the distinction between training and work. Expectations that trainees will be motivated and able to complete web-based training during breaks in their normal workday or on their personal time are unrealistic.[36] Companies need to ensure that employees are given time and space for e-learning to occur.[37] That is, employees need dedicated time, protected from work tasks, for learning to occur. As with other training programs, employees need to understand why they should attend e-learning and the benefits they will receive so as to enhance their motivation to learn. Accurate communications about the content and types of learning activities in e-learning courses need to be provided to employees.[38] Managers need to give employees time in their schedules, and employees need to schedule "training time" to complete training and avoid interruptions that can interfere with learning. Some companies are moving away from their initial expectation that online learning can be completed at the employee's desktop without time away from the job; instead, they are setting up learning labs for online learning to occur without the distractions of the workplace. "Chunking," or using microlearning (discussed in **Chapter Four**), helps trainees learn and retain more than they might in a standard full- or half-day training class. Training can also be more easily integrated into the typical workday. Trainees can easily find 15 or 30 minutes to access a learning session and then return to their work responsibilities.

Technology for Collaboration and Linking

Chapter Four emphasized that learning often occurs as a result of interaction or sharing between employees. Employees learn by informal, unstructured contact with experts and peers. Collaboration can involve an exchange among two or more trainees or among the trainer or other experts.

Hyperlinks are links that allow a trainee to access other websites that include printed materials, as well as communications links to experts, trainers, and other learners. Owens Corning's learning resource home page has hyperlinks to all available forms of training information, including CD-ROM, web-based, and trainer-led programs. The site supports online course registration and allows tests to be sent to trainees, scored, and used to register trainees in appropriate courses.[39]

Research suggests that some employees fail to complete online learning and prefer instructor-led face-to-face instruction over online learning because they want to be able to learn and network with their peers.[40] Effective online learning connects trainees and facilitates interaction and sharing through the use of collaborative learning tools such as chat rooms, discussion boards, or social media. Other methods for learner interaction and sharing include having trainees participate in collaborative online projects and receive tutoring, coaching, and mentoring by experts. Online learning also should provide a link between the trainees and the "instructor"—someone who can answer questions, provide additional learning resources, and stimulate discussion between trainees on topics such as potential applications of the training content and common learning problems.

Massive Open Online Courses

Massive open online courses (MOOCs) refers to learning that is designed to enroll a large number of learners (massive); is free and accessible to anyone with an Internet connection (open); takes place online using videos of lectures and interactive coursework, including discussion groups and wikis (online); and has specific start and completion dates, quizzes and assessments, and exams (courses).[41] MOOCs cover a wide variety of subject matter, including courses in chemistry, math, physics, computer science, philosophy, and leadership. MOOCs are also offered in high-demand areas such as robotics, semiautonomous vehicles, and artificial intelligence. Popular providers of MOOCs include Coursera, edX (a nonprofit founded by Harvard and MIT), and Udacity (a for-profit company founded by a Stanford University research professor and founder of Google X Labs). The courses are often developed in partnership with colleges and universities and, recently, private companies.

Colleges and universities have partnered with MOOC providers to offer free or low-cost online courses, which learners can complete and earn certificates or even college credit if they pass a credential exam. Typically, there is a registration fee to take the exam. The fees range from tens to hundreds of dollars, depending on the course length and content. What are the characteristics of learners who participate in MOOCs? Typically, the learners have already graduated from college and are taking the course to explore an interest or develop their skills, although the numbers of undergrads taking courses has increased. MOOCs have been able to attract huge numbers of learners. For example, Coursera estimates that it has attracted over 5 million learners based in the United States and around the world.

Companies are working with MOOC providers to design custom courses or to create their own MOOCs that can help them meet their skill needs.[42] MOOC-provider edX partnered with UPS, Procter & Gamble, and Walmart to design computer science and supply-chain management courses. Learners who take the course and complete a test can earn a certificate. McKinsey & Company developed a MOOC for all employees that included 10 courses.[43] To maximize learning and application, it decided not to provide course content that focused on defining a topic, discussing its importance, and emphasizing how the company thinks about it. Instead, its course development focused on what a learner would actually do with the content. McKinsey's MOOC also asked learners to use an online notebook to reflect on their thinking as they worked through the course. The notebook included questions that asked learners to discuss the implications of what they were learning for their clients. The notebook helped learners initiate conversations with clients after the course was completed. In the MOOC, learners first were presented with foundational skills and then had the opportunity to choose which skills they wanted to review or explore in greater detail. The courses included a variety of learning tools such as short videos, narrated PowerPoint slides, animated whiteboards, and pdf documents. An evaluation of the MOOC courses six months after they were developed showed that 86 percent of employees had taken courses. Employees who participated in the MOOC had over 700 client conversations and more than 90 percent planned to have future conversations. Eighty-five percent of the learners preferred the MOOC over face-to-face training.

Georgia Tech, Udacity, and AT&T worked together to create a MOOC designed to offer a master's degree in computer science.[44] Also, Udacity and AT&T created MOOC courses for nanodegrees, which provide AT&T's employees with the opportunity to take a series of courses to prepare them for high-technology specializations such as artificial intelligence or data science.[45] To assist employees with navigating the various programs from beginner to advanced, AT&T recently introduced "stackable learning" with Nanodegree Learning Paths. These Learning Paths provide employees with program selection recommendations, contingent on the employee's level of prerequisite knowledge. With over 4,500 Nanodegree graduates, more than 30 percent of these graduates have completed 2 or more Nanodegrees, and more than 1,000 employees are actively enrolled in a Nanodegree program each month. The Nanodegree helps employees prepare themselves with the skills need for emerging jobs. MOOC also benefits AT&T by providing its employees with the STEM skills they need to compete against companies such as Google and Amazon.

MOOCs have several advantages and disadvantages.[46] Some of the advantages of MOOCs for delivering training include: no travel costs; the courses don't disrupt daily work; they provide training content unavailable from local vendors or consultants; and they can give employees access to highly specialized courses or courses that are not part of their current job responsibilities. Also, they include many features that facilitate learning and transfer. For example, learning is interactive and learner-controlled and it involves social interaction and emphasizes application. Learning happens through engaging short lectures combined with interaction with the course materials and interaction with other students and the instructor. MOOCs emphasize applying knowledge and skills using role plays, cases, and projects, and they are semi-synchronous, meaning that learners receive the same assignments, video lectures, readings, quizzes, and discussions but can complete the coursework on their own time. Also, many MOOCs offer college credit or certificates of completion, which provide incentives for learning and formal acknowledgment.

However, despite claims that MOOCs will revolutionize training and education, they have significant disadvantages. Among those who enroll in MOOCs, their interaction with the course tends to drop off after the first two weeks of the course; course completion rates are low (10 to 20 percent); and most students who complete the courses don't take the credential exam. Research suggests that only 5 percent of employees receive financial support from their companies for participating in MOOCs.[47] Compared to employees who pay for MOOCs on their own, employees who receive company financial support for use of MOOCs have higher course completion rates and are less likely to look for job opportunities outside of their current employer after completing MOOCs. MOOCs may be inappropriate for courses where synchronous or real-time collaboration or interaction is needed. Finally, there are security concerns with MOOCs. It is difficult to determine if the person completing the course or program is actually the learner or someone else who is helping them.

To enhance their chances of being effective, MOOCs need to provide an interesting and engaging lecture that is broken up into quizzes and problem sets that learners must complete before they can progress. Learners who complete course topics should be provided with incentives such as badges. Visual meters should be used to provide feedback on progress toward completing the course. The course also needs to include interaction through discussion boards and interactive videos. Also, learners need to have the technological skills and technology capability required to access the MOOC, view videos, and participate in online discussions. Monitoring tools can be used to determine the identity of the learner taking the course.

Social Media: Wikis, Blogs, Microblogs, and Social Networks

Social media are online and mobile technology used to create interactive communications and allow the creation and exchange of user-generated content.[48] They include blogs, wikis such as Google Docs, networks such as Facebook and LinkedIn, microsharing sites such as Twitter, and shared media such as YouTube. **Table 8.7** shows how social media can be useful for training.

TABLE 8.7 How Social Media Can Be Used in Training

- Provide links to resources such as webinars, videos, and articles related to new learning content.
- Help determine future training needs and issues by using tagging capabilities.
- Reinforce and sustain learning.
- Use as a coaching and mentoring tool.
- Link learners before, during, and after a formal training event.
- Engage employees.
- Provide content prior to a face-to-face learning event.
- Link learners and building communities of learning before, during, and after training.
- Share and create videos.
- Allow multiple learners to edit documents at the same time.
- Help learners identify who has the expertise they need and gain access to subject-matter experts.

Sources: Based on T. Bingham and M. Conner, *The New Social Learning* (Alexandria, VA: American Society for Training and Development, 2010); M. Derven, "Social Networking: A Force for Development?" *T+D,* July 2009, pp. 59–63.

A **blog** refers to a webpage where an author posts entries and readers (often) can comment. There are many different types of blogs, including personal blogs written by one person; company blogs used for marketing and branding purposes; topic blogs focusing on a specific topic area; and blogs based on media (video blogs) and devices (mobile device blogs). There are several considerations for effectively using blogs in training.[49] For a blog to be useful for training, it should be related to the learning objectives; otherwise, trainees will find it to be "busy work" and fail to see its benefits. Blogs can be especially useful for trainees to analyze and synthesize information, for learners to reflect on the lesson or course content, and to share ideas and applications of learning content. Instructors need to provide timely and relevant feedback on blog entries. Also, instructors must provide guidelines regarding how blog entries will be evaluated or what types of blog entries are desired (e.g., new ideas, application-related, "what did I learn?"). Blogs also can be useful for training courses involving group work such as projects and cases. Blogs provide a way for team members to share comments, insights, and even get involved in brainstorming.

A **wiki** refers to a website that allows many users to create, edit, and update content and share knowledge. **Microblogs** (or **microsharing**) refer to software tools such as Twitter that enable communications in short bursts of text, links, and multimedia either through stand-alone applications or through online communities or social networks. **Shared media** refers to audio or video such as YouTube that can be accessed and shared with others.

How are social media being used for learning, training, and development? Many companies are using social networking tools to help employees learn informally and share knowledge both on an as-needed basis and as part of formal training courses.

Consider the following companies and nonprofit organizations' use of social networking tools.[50] Humana, a health-care company, has a social learning platform, known as the Knowledge Exchange, which is designed to build online communities to help employees learn from one another. For example, 100 employees from different departments, business units, and jobs interacting with each other using Knowledge Exchange identified data visualization as an interest and a common learning need. They collaborated, identified learning resources, and learned from each other about data visualization. They used the skills they learned to develop a data visualization product that used the group members' survey results about the effectiveness of the course. At Cisco, every new employee is trained about the appropriate use of social media. Cisco's employees have several tools they can use to interact with one another. An internal WebEx Social platform allows employees to collaborate in teams and get feedback from experts throughout the company. Employees can access a dashboard that lets them examine newsfeeds, check meetings and calendars, and review work. General Electric Company created an internal social media platform called GE Collab that allows employees to follow each other, add hashtags to comments so they can be found in searches, and link discussions to documents.

TELUS, a Canadian telecommunications company, has an internal social network (Jam) that encourages employees to create and share content on the site. Jam gives employees the power to assign, share, and manage individual or team tasks, join learning program groups to exchange knowledge and experiences, and recommend content to their peers. For example, team members can post or respond to technical and operational questions in the "As a Peer" sandbox. The "Parking Lot" sandbox allows employees to have real-time conversations about training content. Verizon uses social networking tools to train employees to support new products and devices. Device Blog, Device Forum, and Learning Communities help ensure that employees are ready to support customers when new products and devices are introduced to the market. These social networking tools also facilitate peer-to-peer learning. Device Blog makes available information and updates on wireless devices (such as the Droid), frequently asked questions (FAQs), how-to videos, and troubleshooting tips. Device Forums enable retail employees to learn from peers and product manufacturers. Employees can ask each other questions, share issues, post tips, make suggestions, and access product experts. Learning Communities are accessed through the Device Blog. They include video blogs, message boards, links to online training modules, and product demonstrations. In addition to these tools, employees have access to My Network for collaborating with their peers, sharing knowledge and documents, and creating working groups. Some instructors also use it for posting supplemental content for learners' use.

IBM uses social media to connect its employees around the world. IBM's site, known as w3, contributes to the global integration of the company. The w3 On Demand Workplace is a powerful productivity and collaboration tool for 400,000 IBM employees in 75 countries. The w3 can be used by employees to find resources and tap into knowledge from peers around the world to help clients innovate and succeed. Employees can create personal profiles, bookmark websites and stories that they are interested in, comment on company blogs, contribute to wikis, share files, and read and review position papers, videos, and podcasts.

Special People in Northeast Inc. (SPIN), a nonprofit organization that provides services to individuals with disabilities, makes webcasts as well as videos, how-to manuals, and process flowcharts electronically available to employees to ensure that the knowledge of key employees is documented and current practices and procedures are available and shared. Intel encourages informal learning in two ways: through knowledge sharing and by providing employees with "performer support." Both knowledge sharing and performer support are part of Planet Blue, a social media platform for Intel employees. Employees also have access to Intelpedia, an internal wiki that employees can edit. Intelpedia has millions of pages, and thousands of employees have contributed to it. Intelpedia helped create a culture for using technology-based information-sharing solutions at Intel.

How can you determine if social media will be an effective learning tool in a company? **Table 8.8** shows the factors to consider in answering this question. The more "yes" answers to these questions, the more likely that social media will be an effective learning solution. The most important consideration is whether social media are already being used in the company, which makes it easier to determine how it fits into the company's learning strategy and how easily it could be adapted to training.

TABLE 8.8 Factors to Consider in Deciding to Use Social Media for Training and Learning

- Are social networks already being used in the company?
- Does social networking fit into the company's learning strategy?
- Are employees geographically dispersed?
- Does the learning strategy support on-the-job learning?
- Is there is a need to foster collaboration?
- Are employees comfortable using social networks?
- Does the business require substantial teamwork?
- Does knowledge need to be shared quickly?
- Does the company value innovation?
- Does the culture support decentralized decision making?

Sources: Based on T. Bingham and M. Conner, *The New Social Learning* (Alexandria, VA: American Society for Training and Development, 2010); M. Derven, "Social Networking: A Force for Development?" *T+D,* July 2009, pp. 59–63.

It is important to support the use of social media and to consider if the ideas, content, and recommendations provided in social media are high quality and match company priorities. Evans Analytical Group (EAG), a high-tech analytical services company, is using social media to reduce the time it takes to locate subject-matter experts (SMEs) and to connect its globally dispersed employees.[51] This is important because EAG's 800 employees might not know about possible topic experts because the company has completed over 25 mergers and acquisitions during the past several years. Employees use Twitter, LinkedIn, or the company's intranet to find and collaborate with SMEs and acquire and contribute knowledge. Social media usage is also encouraged to reinforce knowledge and skills learned in training programs.

EAG supports the use of social media tools in several different ways. Employees are encouraged to use blogs and wikis by linking their usage to their performance appraisals. Also, each week the company publicly recognizes employees with the highest weekly usage rates of social media tools on its intranet, and the CEO endorses using the tools at company meetings. To help employees understand how to use social media tools and their potential value, EAG provides training videos, tutorials, and frequently asked questions (FAQs) that employees can access on the intranet. To ensure that the tools are effective, an employee steering committee conducts interviews and gathers survey data. For example, they compared knowledge retention between two groups of employees who collaborated after they received training. One group used blogs and wikis and the other group used Chatter, a social collaboration tool. The knowledge retention scores did not differ between the two groups. However, 90 percent of the employees found the tools useful. IBM conducts an expertise assessment to ensure the quality of the recommendations employees' provide using social media.[52] All employees conduct an annual self-evaluation that defines their skill level and ability to serve clients. The skills level choices include: entry, foundational, experienced, expert, and thought leader. These rankings help employees find those who have the knowledge and experience that they need for a particular skill or solution. Self-evaluations of "thought leader" and "expert" are verified by a second line manager and SMEs. Also, it may be necessary to have an editor monitor online postings to ensure that they reflect how the company wants to be perceived. The trade-off of quality evaluations and monitoring is that they may inhibit collaboration and networking.

Blended Learning

Because of the limitations of online learning related to technology (e.g., insufficient bandwidth and lack of high-speed web connections), trainee preference for face-to-face contact with instructors and other learners, and employees' inability to find unscheduled time during their workday to devote to learning from their desktops, many companies are moving to a hybrid, or blended, learning approach. **Blended learning** combines online learning, face-to-face instruction, and other methods for distributing learning content and instruction. Blended learning courses provide learners with the positive features of both face-to-face instruction and technology-based delivery and instructional methods (such as online learning, distance learning, or mobile technologies like tablet computers or iPhones), while minimizing the negative features of each.[53] In comparison to classroom delivery, blended learning provides increased learner control, allows for self-directedness, and requires learners to take more responsibility for their learning—all factors consistent with the recommendations of adult learning theory discussed in **Chapter Four**.[54] In comparison to pure online learning, blended learning provides more face-to-face social interaction and ensures that at least some of the instruction is presented in a dedicated learning environment. Blended learning uses the classroom to allow learners to learn together and to discuss and share insights, which helps bring learning to life and make it meaningful. Live feedback from peers is preferable to feedback received online.[55]

One popular application of blended learning is the flipped classroom. The **flipped classroom** blends online and face-to-face instruction. Learners watch lectures, complete online simulations, read books and articles, take quizzes to assess their knowledge and skills, and come to class to work on projects and cases, hear speakers, and interact with faculty.[56] The flipped classroom recognizes that face-to-face instruction using lectures can be effective when it is delivered to individual learners rather than to a group of learners in the classroom. Lectures can be captured on video and delivered online. This frees up face-to-face classroom time for reinforcing and applying knowledge and skills. One of the keys for success of the flipped classroom is that learners must understand and complete the assigned content prior to coming to class. Although learners work by themselves online, it is important that the trainer be available via phone, e-mail, or chat room to answer the learners' questions. Also, learners should be required to complete quizzes or exams and earn above a passing score before they can attend the classroom session. Blended learning has been found to be more effective than face-to-face instruction for motivating trainees to learn and for teaching declarative knowledge or information about ideas or topics.[57] It appears that blended learning capitalizes on the positive learning features inherent in both face-to-face and web-based instruction. Interestingly, learners react more favorably toward classroom instruction than blended learning. This may be because blended learning courses are more demanding, requiring a greater time commitment because of the use of two learning approaches. Research suggests that the most significant issues or problems with blended learning are fast-changing technology, insufficient management support and commitment to blended learning, and a lack of understanding of what blended learning really is and how to implement it.[58]

Consider the use of blended learning and the flipped classroom by Providence St. Joseph Health, Federal Deposit Insurance Corporation, BKD, and Anthem.[59] Providence St. Joseph Health wanted nurse managers to receive training that they could apply to their jobs but that did not require long hours away from work. The company chose a blended learning solution that focused on enhancing leadership skills (such as goal setting, managing teams, and leading change). The program consisted of four instructor-led training sessions and an online experience. The instructor-led training included creating small teams of nurse managers who shared ideas face-to-face. The online training included discussion boards allowing the nurses to network and continue to share ideas, additional leadership skill content, and assignments that required them to apply what they learned to their jobs.

Adopting a blended learning approach can result in significant time and cost savings. Federal Deposit Insurance Corporation (FDIC), an independent government agency charged with maintaining the stability and public confidence in the U.S. financial system, has started to replace four face-to-face instructor-led courses in its Contract Oversight Manager curriculum to blended learning. The first course using blended learning reduced training time from 16 hours to 3 hours 30 minutes. This means oversight managers can be trained faster. BKD, a national accounting firm, added virtual pre-learning into instructor-led courses, which eliminated the need for an additional day of training. This reduced travel and meeting room rental, instructor, and hotel costs by $40,000.

Anthem, Inc., a health insurance provider, transitioned from face-to-face learning for its associates to online training that provides learners with more control and the ability to learn from a coach and their peers. Anthem Health Guide (AHG) is a consumer product that helps them better understand and use their benefits. AHG Flipped Classroom training begins with a video chat orientation where trainers introduce learners to the learning objectives, training agenda, and the technology that will be used. The training content is then delivered face-to-face using videos, games, group activities, role plays, and individualized coaching. Also, a social collaboration site on the company intranet provides learners with the opportunity to interact with trainers and other learners.

Simulations and Games

Simulations and games were introduced as a traditional training method in **Chapter Seven**. Developments in software and computer technology have improved the learning and transfer that can result from simulations and games. These training methods, which can be delivered via a personal computer or gaming technology such as an Xbox, immerse trainees in an artificial, yet realistic environment that allows them to learn the consequences of their decisions. Both simulation and games can be used for training interpersonal skills and how to use equipment. Simulation games are widely popular—one estimate is that 65 percent of adults play video games![60]

Serious games refer to games in which the training content has been turned into a game but has business objectives.[61] "Gamification" means that game-based strategies are applied to training programs. The key is to use the fun and motivational aspects of games to help employees acquire knowledge and skills. **Table 8.9** shows four different types of simulations and games. Some simulations include virtual reality or take place in virtual worlds. **Virtual reality (VR)** is a computer-based technology that provides trainees with a three-dimensional learning experience. This allows simulations to become even more realistic. Using specialized equipment or viewing the immersive model on the computer screen, trainees move through the simulated environment and interact with its components.[62] Simulations allow the trainees to experience **presence**, which refers to the perception of actually being in a particular environment. Presence is influenced by the amount of sensory information available to the trainee, control over the environment, and the ability to modify the environment. In simulations, presence can include trainees feeling a sense of motion or experiencing emotions such as anger from a customer or colleague. Poor presence may result in trainees experiencing vomiting, dizziness, headaches (simulator sickness), and frustration because senses are inappropriately distorted.

BNSF Railway uses VR welding training simulators to accelerate employees' mastery of welding techniques and success.[63] The welding VR simulates the sights, sounds, and techniques of welding to help learners develop dexterity and muscle memory. Training using VR also saves on the raw materials, wire, and shielding gas that would be used in actual welding training. Instructors can help learners get more repetition and practice, reduce training time, and accelerate the certification process. Instructors can track student performance and progress in real time. The VR welding helmet immerses students in the environment. Instructors can see

TABLE 8.9 Types of Simulations

Type of Simulation	Description
Branching story	Trainees are presented with a situation and asked to make a choice or decision. Trainees progress through the simulation on the basis of their decisions.
Interactive spreadsheet	Trainees are given a set of business rules (usually finance-based) and asked to make decisions that will affect the business. The decisions are entered into a spreadsheet that shows how the decisions affect the business.
Game-based	Trainees play a video game on a computer.
Virtual	Trainees interact with a computer representation of the job for which they are being trained.

Sources: Based on C. Cornell, "Better Than the Real Thing?" *Human Resource Executive,* August 2005, pp. 34–37; S. Boehle, "Simulations: The Next Generation of E-Learning," *training,* January 2005, pp. 22–31.

the welding from the student's viewpoint and give immediate feedback and adjustments. Historically, welding training was static and limited to available materials, tools, and lab set-up. This also led to injuries because employees were not ready for live learning environments.

FedEx, the multinational delivery services company, uses VR to teach new package handlers what to expect on the job and how to stay safe.[64] The volume (across FedEx, package handlers unload and load millions of packages every day) and the physical demands of the work make it a difficult job. The system allows trainers to track where trainees focused their eyes in the VR headsets. This feature allowed trainers to correct potential safety issues by checking whether trainees were looking in the right places during simulations of loading and unloading packages. New hires have not only been excited to participate in the VR training, but they are also more knowledgeable and safer.

During the COVID-19 pandemic, which has forced employees to work remotely, some companies are using VR as a substitute for web conferencing to help build workplace relationships. Fidelity, a financial services company, shipped VR headsets to new employees working in its operations area.[65] The employees participated in teambuilding exercises and training using VR. Fidelity found that the VR experience provided a better feeling of presence, an immersive environment, and allowed for more interaction between employees than web conferencing tools such as Zoom.

Simulations can also be used for team training. For example, IBM uses a simulation to train security teams in how to handle cyberattacks.[66] The staging area is similar to a flight simulator but with room for two dozen people. Video panels cover the front wall and racks of computer servers located below the floor simulate the data stream of a company's network. One simulation involves a phishing e-mail sent to an HR representative. The hackers take data before the information technology crew can determine the source of the computer breach. After news of the breach is leaked to the press, U.S. government agencies start an investigation. As the simulation develops, the security team discovers that the hackers have also changed the company's financial data before its quarterly report. Security teams have to learn to deal with the pressure the breach creates, identify what has been stolen, take steps to notify the appropriate persons and agencies, and secure the breach.

As you can see from these examples, there are several reasons why simulations benefit the company and the trainee. Table 8.10 summarizes the characteristics of effective simulations. That is, employees are willing to practice, retain content and skills, and transfer training to their jobs.

TABLE 8.10 Why Simulations Can Be Effective

Learners are emotionally engaged (even fun!)
A consistent message of what needs to be learned is provided
Learners receive feedback
Learners can work at their own pace
A variety of situations or problems can be presented to learners
Simulation accurately portrays reality, enhancing its meaningfulness
Learners are put in situations that would be too dangerous in the real world: Employees can learn, make errors, and practice tasks without real-life implications (e.g., broken equipment, angry customers or employees)
Shorter training time and increased return-on-investment result

Sources: Based on J. Bersin, "VR Makes Learning Authentic, Memorable," *Chief Learning Officer,* October 2019, p. 18; S. Likens and D. Eckert, "Virtual Reality Creates a New Environment for Employee Training," *strategy + business,* October 6, 2020, from www.strategy-business.com, accessed October 14, 2020; S. Marlow, C. Lacerenza, D. Reyes, and E. Salas, "The Science and Practice of Simulation-Based Training in Organizations," in *The Cambridge Handbook of Workplace Training and Employee Development,* ed. K. Brown (New York: Cambridge University Press, 2018), pp. 256–77.

Many companies are using games and gamification. An ATD survey of learning professionals found that 25 percent of companies use gamification in learning and 20 percent use serious games.[67] Games are being used both as the only training methods and within instructor-led and virtual courses.[68] PwC's uses a live app-based trivia game, PowerUp![69] The game is designed to motivate the firm's more than 50,000 U.S. employees to obtain knowledge on digital upskilling topic areas such as data, analytics, artificial intelligence, automation, and blockchain. Two live 10-minute games are offered two times each week. Players can join an existing team, form their own team, or play as an individual. Each game includes ten questions focused on a digital topic and strategic initiatives. Results are posted on leaderboards and individuals and team winners receive prizes. Results showed that half of the employees played the game at least once, with 62 percent playing five or more games. The game also reinforced PwC's team-based culture essential to providing client service. Over 6,000 teams played the game, and many employees worked collaboratively to develop study guides to prepare for the games.

Similarly, Walmart provides its employees with an app that gives them access to Spark City, a game to help them understand a day in the life of an hourly supervisor.[70] Players design an **avatar** and then use that avatar to make decisions about inventory, staffing, and customer service in a dry grocery department. Users of the game include employees currently in the department manager supervisor role and others who want to experience the role to see if it interests them such as a cashier who works at a register. NTT, a global technology services company, developed a gamified learning program to encourage employees to continually upskill.[71] The program, known as Tops, provides defined pathways for acquiring skills, becoming eligible for certain roles, or attaining certifications. Tops includes both online and on-the-job training. The program has four levels (explorer, trailblazer, champion, and legend) that vary in difficulty. Employees are awarded badges when they complete each level. Employees who reach the legend level must complete additional training activities within six months to retain their status. Tops has shown positive results, including an increase in call-flow improvements and a decrease in customer complaints.

We all know that games can be fun, but what questions should you consider in purchasing or building a serious game for training? **Table 8.11** shows the characteristics of effective serious games. It is important to establish the purpose of the game and its relationship to the learning objectives. Games can be used for safety training, product training, team building, and new employee orientation. It is also necessary to determine what behaviors or tasks trainees should be able to perform as a result of playing the game. Learners should be engaged through meaningful game scenarios, narratives, and problems. Games should use leaderboards to increase learners' motivation by capitalizing on their competitiveness. Also, ideally games should include different levels that require learners to demonstrate their competency in prerequisite knowledge and skills (by achieving certain scores) before learning more challenging knowledge and skills. Finally, games should be tested (recall our discussion of formative evaluation in **Chapter Six**) to ensure that they are easy to use and logical and that technology problems are minimized.

TABLE 8.11 Characteristics of Effective Serious Games

- Related to the learning objective.
- Includes behavior or tasks that need to be learned.
- Has levels based on degree of difficulty,
- Learners have the necessary device to access it.
- Fun and drives engagement in learning.
- Provides feedback and elements such as leaderboards, meters, or badges to motivate friendly competition between employees or teams.
- Tested to insure learners can follow instructions and navigate appropriately.

Sources: Based on J. MacGiver, "Learning Can be Fun," *T+D,* August 2019, pp. 65–68; G. Midford, "Video Game Tutorials Exhibit Good Design Techniques," *T+D,* April 2019, pp. 44–49; C. Balance, "Strategic Ways to Develop Game-based Learning for High ROI," *T+D,* September 2013, pp. 76–77; B. Roberts, "Gamification: Win, Lose or Draw," *HR Magazine,* May 2014, pp. 28–35; R. Paharia, *Loyalty 3.0* (New York: McGraw-Hill Education, 2013).

Simulations and games do have some disadvantages. The use of simulations and games has been limited by their development costs.[72] Developing a VR program includes creating a strategy and identifying objectives, designing and producing the curriculum, setting up equipment and training employees to use it, and analyzing program results. The costs for developing a VR program can range from $40,000 to $500,000. Software costs can range from thousands to millions of dollars depending on its size. One estimate is that VR requires about a 48 percent greater investment in development than similar classroom or e-learning courses. This means that if VR is effective, the more employees who are trained using it, the higher the likely return on investment due to time saved and lower cost per employee. For example, PwC VR training for leadership skills costs similar to classroom training at 375 learners and e-learning at 1,950 learners considering development costs, hardware and software, the cost of facilitators, and costs to travel to a training site. VR headsets such as Oculus Go now cost about $200. Although the cost per headset is low, consider that Walmart ordered 17,000 for training its retail employees. That results in a $3.4 million expense that needs to be offset by the benefits realized from the training. The average cost for a basic 15-minute game is $20,000 to $30,000, but games can range from $5,000 to $250,000.[73] However, although they continue to be an expensive training method, development costs for simulations continue to decrease, making them a more popular training method. Also, the use of simulations as a training method is likely to increase as technology development allows more realism to be built into simulations.

In addition to cost, there are other disadvantages as well. Games and simulations are useful for practicing skills, but trainees must first acquire knowledge and then apply it while playing the game.[74] Debriefing learners after a game is useful for helping trainees understand how their simulation experience relates to their work. Another drawback is that, although the novelty of a simulation may help trainees recall the experience, it may also interfere with retention and transfer of training content to the job.[75] Learners may not take a simulation seriously. Learning in a simulation may be better for those who already have some job experiences because simulations may confuse and overwhelm some learners. Finally, trainees may not be comfortable in learning situations that lack human contact.

Augmented Reality

Augmented reality (AR) allows trainees see the physical world around them but their view includes virtual media.[76] That is, it brings digital elements into the physical world to enhance the information and context that people experience.

Augmented reality shares some similarities yet has significant differences from virtual reality (VR).[77] Both VR and AR require the user to wear a headset or glasses. However, in VR the trainee sees an entirely separate world. Virtual reality uses computers to simulate an environment in which trainees are totally immersed. In contrast, trainees wearing AR glasses or headsets see real physical surroundings but images and messages are projected into their line of sight. The major difference between AR and virtual reality is that the physical reality is always present in AR. Another way of thinking about the differences between virtual reality and AR is that AR provides information that supplements the real world in which the employee is working. This information could include instructions for completing a task, digital graphics, or a PowerPoint presentation. A good example of how AR works is to consider Pokémon GO. When playing Pokémon GO with a smartphone, cartoon characters pop into the view of the real landscape waiting to be captured. In contrast, virtual reality creates an entirely artificial training environment. VR is valuable for situations that are hard to replicate, dangerous, or expensive to recreate. It allows learners to review scenarios and see the implications of applying knowledge and skills without harming the environment, facilities, or other people. VR also allows trainers to simulate different types of conditions.

AR has several advantages.[78] AR can provide learning opportunities for the trainee while they are working or participating in on-the-job training. Employees can interact with experts and specialists, view live feeds, and access real-time data, instructions, diagrams, manuals, and videos. AR is especially useful for showing employees what they should do rather than just telling them. For example, industrial workers or repair technicians can use eyeware such as Google Glasses to see information on repair records, refer to instructions, access an expert, call up and watch a short training video, and check if they have correctly assembled a product without having to leave the work area. AR can support other face-to-face and technology-aided training methods as well. Employees can complete a formal online or face-to-face class or simulation and AR can be used for on-the-job support. Because training for some roles can become quickly obsolete, AR allows employees to stay up-to-date by accessing the most recent knowledge and procedures without having to interrupt their work.

For example, NTPC, an India-based utility company, uses mixed reality (both VR and AR) to teach employees the skills needed to dismantle, repair, and reassemble electric turbines.[79] NTPC uses smartglasses with Microsoft HoloLens technology. The glasses allow trainees to see both the turbine in a virtual environment and the instructor in the real world. Verizon provides field technicians with wearable headsets so they can access information when working in dangerous places such as on utility poles. Initial results suggest the headsets are effective.[80] Eight percent of users said the headsets helped improve their job performance, 75 reported they completed tasks faster, and 62 percent believed they led to a reduction in errors.

Despite its advantages, there are significant barriers to the widespread adoption of AR. For example, companies need to invest between $1,000 and $3,000 for headsets or smartglasses, which makes it costly to use—especially for small employers. All forms of AR need a bright display, potentially limiting its application for outdoor work. Battery life can be a concern because AR uses a great deal of power. Although nausea and dizziness mostly occur for VR users, this also can be a problem with AR. Finally, employees may be reluctant to use AR because they are resistant to change or believe it could eliminate their jobs.

Mobile Technology and Learning

Mobile technology allows learning to occur anywhere, at any time. Mobile technology consists of[81]

- Wireless transmission systems such as Wi-Fi and Bluetooth that allow transmission of data without the need for physical connections between devices or between a device and an Internet connection.
- Mobile devices such as smartphones, tablet computers, iPads, global positioning system (GPS) devices, and radio frequency identification (RFID) chips.
- Software applications related to processing audio files, word processing, spreadsheets, Internet, e-mail, and instant messaging.

GPS and RFID devices are used for tracking customers, employees, and property. For example, many cars and trucks are equipped with GPS devices to allow operators to locate drivers. Trucking companies use GPS devices to track loads and to determine expected arrival times. RFID chips are embedded in products to track their movement and to help in inventory control. Hotels are providing mobile devices to allow customers to access information about guest services, dining, entertainment, and accommodations anywhere on the hotel property. Airlines provide pilots with iPads they can use while in the cockpit.[82] The iPads give the pilots easy access to airport runway approaches, real-time weather updates, and runway diagrams. Before the iPads were available, pilots had to carry heavy flight bags (some weighed 35 pounds) with all of the necessary navigation charts and manuals. Besides giving pilots easier access to the information they need, replacing the flight bags with the iPads has resulted in the airlines saving on fuel costs. American estimates that removing the flight bags saved about 400,000 gallons of fuel, which is close to a $1 million savings in fuel costs!

Mobile learning refers to training that provides trainees with anytime and anywhere access to instructional resources such as videos, pdfs, simulations, games, or courses.[83] The instructional resources are accessible through a mobile device such as a smartphone, notebook computer, iPad, or even wearables such as Google Glasses.

Mobile learning shares all of the potential features of e-learning or online learning shown in **Figure 8.2**. But mobile learning is different from e-learning because trainees can use a greater variety of devices to access instructional resources. Also, mobile learning offers the opportunity to customize the learning delivered based on the features of the trainees' environment, such as when they are with a client or repairing a machine compared to when they are trying to learn a new skill during their free time.[84] One estimate is that slightly less than half of e-learning is delivered using mobile devices. Mobile learning can involve both formal and informal learning. Formal learning might include e-learning courses, podcasts, or videos on the mobile device. Informal learning includes engaging in communication and messaging with other employees or experts via Twitter, blogs, or Facebook.

The advantages of mobile learning include that it is an easy way to get up-to-date information to employees; it can be useful for enhancing transfer of training through providing follow-up; it brings training to employees who are constantly traveling, are out of the office visiting customers or clients, or don't have the time to attend a face-to-face course or program (such as salespeople or executives); and learners can complete training on their own time and at their own pace. Mobile learning allows employees to generate content by creating video, taking photos, or recording an interview and sharing it with others. Also, using mobile devices for learning appeals to millennials. Mobile devices can also provide RSS feeds, shared media (such as YouTube videos), and podcasts. **Podcasts** are audio or video program content distributed in episodes using software such as RSS. The best use of podcasts is for narrative-based content that inspires the user's imagination using music and sound effects.[85] Podcasts are great for sharing the expertise of SMEs using interviews, stories, and role plays. It is cheap and easy to produce using a microphone, computer with audio software, portable digital recorder, Skype phone recorder, headphones, or speakers. An advantage of podcasts is that learners can listen at any time or place using many different mobile devices such as iPhones, iPads, or notebook computers. Through mobile technologies, training and learning can occur naturally throughout the workday or at home, employees can be connected to communities of learning, and employees can learn at their own pace by reviewing material or skipping over content that they already know.[86]

For example, Infosys BPO, a global business process outsourcing company, wanted its learning to be accessible on employees' mobile devices.[87] As a result, Infosys created a collaborative learning platform on which employees can have discussions, play short learning games, access their training schedule, and review industry news and company updates. Many of the company's training courses, which prepare new employees to serve as partners to clients, are accessible on mobile devices.

Just as you may use apps on your smartphone to access games, social networks, and music, apps can provide the way that employees can access training. **Apps** refer to applications designed specifically for smartphones and tablet computers. Apps are being used as the primary training method, to supplement training, to manage the path or sequence of training, and to help employees maintain training records.[88] Consider how McDonald's, Two Men and a Truck, and Deloitte are using apps for mobile learning.[89] McDonald's Archway to Opportunity program provides employees with free education opportunities and college tuition assistance. Through the program, employees can develop their English skills, complete high school, or make progress toward an Associates or Bachelors degree. To maximize the benefits employees can gain from the Archway to Opportunity program, McDonald's developed an app (Archways to Careers) that employees can download. The app provides learning content and career advice. The app includes a personal assessment to help employees identify their skills and interests and what kind of career they might want to pursue at McDonald's. It provides answers to questions employees might have about how to pay for college courses or explore education and career opportunities. For example, it provides links to colleges that offer discounted tuition. Employees can also access live advisers who can answer their questions, plan strategies to reach their goals, and provide suggestions on how to overcome issues they face such as scheduling study time or dealing with child care, work, and school demands. Employees are encouraged to interact with their advisers any time they feel frustrated or have more questions.

Two Men and a Truck, the moving company, uses multiple apps to facilitate learning. One app gives employees access to courses available on its learning management system from any mobile device. Another app provides a way that employees can access training videos on an as-needed basis while they are on the job. The company plans to develop an app that employees can use to access training materials, share best practices, and have discussions with their peers. Deloitte has a number of apps that support learning in different ways. One app helps learners assess their competencies. The apps support the delivery of live training events by allowing access to program materials, enabling employees to identify and use personalized training content, sharing content with others, and interacting with their peers.

It is important to recognize the potential disadvantages of mobile learning.[90] One disadvantage is that developers have to consider the device and operating systems that trainees have in order to make mobile learning accessible. It is costly to customize access to instructional resources for different devices that trainees might use, especially if the company has a "bring your own device" (BYOD) policy. Another disadvantage is that texts, phone calls, alerts, and interruptions from other people at work or at home may distract trainees from learning when they are using their mobile devices. A third disadvantage is that although trainees may be knowledgeable about many of the features of their device (such as how to make a phone call on a smartphone), they may be unfamiliar with other features that are used in a training course, such as how to make videos. Trainees may be reluctant to use mobile learning if they feel they lack the skills required to effectively use the device. Finally, text and video may be difficult to see if trainees are using their smartphone to access instructional resources.

For mobile learning to be effective, it needs to be short, easy to use, and meaningful.[91] One estimate is that the course length should not exceed 10 minutes because users likely do not have long periods of time for learning, and attention spans are limited when looking at the small screens on many mobile devices. The screen layout should work with or without graphics. Images should be used only where relevant to the content because download time may be slow due to bandwidth limitations. Images used should be sized so that the user can see them without scrolling horizontally or vertically. Technical requirements due to screen size, web browsers, and mobile operating systems need to be considered, as well as the availability and ability to use plug-ins such as Flash, Java, and Portable Document Format (PDF). Also, simply repurposing lectures by digitizing them and distributing them to employees will not facilitate learning. For example, Capital One created simulated radio shows with phone-in questions and answers given by announcers to create an audio learning environment that is enjoyable and interesting. As with e-learning, training that uses mobile technology may be most effective if it is part of a blended learning approach that involves face-to-face interaction among trainees as well as audio learning.

Adaptive Training

Adaptive training refers to training that customizes or adapts the content presented to trainees based on their learning style, ability, personality, or performance.[92] These adaptations include the variety, difficulty, and sequencing of content as well as practice problems. In adaptive training, instruction changes based on trainees' scores on tests or quizzes completed either before training or at various times as they experience training. This assessment results in adaptations of the content to best help the trainee learn. Although trainers strive to meet the individual needs of learners, this can be difficult using face-to-face training methods. Online training makes it easier to use ongoing assessments to identify the most effective instructional pathways for learners. The major challenge in developing adaptive training is to ensure that the different content customizations match learners' needs and help them attain the learning objectives.

For example, LearnSmart is an interactive and adaptive study tool that is used in some college courses.[93] Based on their performance on quizzes throughout the course, students are directed to practice exercises and sections of online textbooks they need to read. LearnSmart is designed to help students better use their study time, as well as improve their retention, their recall of the material, and their grades. Aristocrat Technologies, a gaming machine manufacturer, has replaced online learning courses for its repair technicians with adaptable microlearning modules.[94] The modules are sent to their phones so they can review the content between their jobs and answer short quiz questions. The system uses their quiz scores to learn what they know (and don't know) and uses this information to choose what content to send them next. Technicians have to master each module twice before they can move on to another module. Technicians' success rates on the modules are tracked, which allows the learning manager to identify where they might need more additional training. For example, the learning manager saw that the majority of technicians were having difficulty correctly answering a set of questions related to meter-reading, which is a skill they are expected to learn on the job. The meter-reading scores were found to be related to error rates on the job, suggesting a knowledge gap that needed to be corrected. As a result, the learning manager added a meter-reading course for all new hires.

Adaptive training also includes intelligent tutoring systems that use artificial intelligence.[95] Air Methods, a company that provides medical transportation using helicopters, implemented a cloud-based learning system that uses artificial intelligence to adapt to each helicopter pilot's topic knowledge based on how they perform on quizzes and games.[96] If the pilot is not scoring well on the quizzes for a particular training module, the system will present information in a new way and retest the pilot before he or she can move to the next training module. The use of adaptive training has saved training costs by eliminating 50 percent of the company's in-person instructor-led training courses and reducing the training time required by new pilots as part of the onboarding process.

Distance Learning

Distance learning is used by geographically dispersed companies to provide information about new products, policies, or procedures, as well as deliver skills training and expert lectures to field locations.[97] Distance learning includes virtual classrooms, which have the following capabilities: projection of still, animated, and video images; instructor-participant audio discussion; sharing of computer software applications; interactions using instant polling technology; breakout rooms for learners to meet; and whiteboard marking tools.[98]

Distance learning features two-way communications between people through the use of web-conferencing software such as Zoom or Microsoft Teams.[99] **Web conferencing** involves instruction that is provided online through live broadcasts. Trainees attend training programs in training facilities in which they can communicate face-to-face with trainers (who are at another location) and other trainees using the personal computer. You likely personally experienced virtual classes in school or training at work during the COVID-19 pandemic through the use of web conferencing software such as Zoom or Microsoft Teams.

A **virtual classroom** refers to using a computer and the Internet to distribute instructor-led training to geographically dispersed employees. The potential advantages of the virtual classroom include its cost savings and convenience: geographically dispersed employees can be brought together for training for several hours each week, and content experts can be brought into the classroom as needed. Also, virtual classrooms offer opportunities for real-time interactions between the instructor and learners. Some of the most popular ways for encouraging interaction include live polls, hand-raising prompts, and video and multimedia streaming.[100]

However, the training delivered using a virtual classroom is not the same as the training delivered face-to-face by an instructor. There are a number of guidelines for developing effective training in the virtual classroom:[101]

- Design short modules and follow up with an assignment that applies the learning to the job.
- Make learning interactive and interesting, such as modeling the program after a phone-in radio show.
- Include media such as video and audio.
- Limit classroom size to no more than 25 learners.
- Create a guide providing questions, key points, and activities for facilitators at each site.
- Offer learners multiple ways of interacting with each other and the instructor, including webinars, polls, e-mail, discussion rooms, chat tools, message boards, and blogs.
- Test the technology before the first class to ensure it is ready and you know how to use it.

To continue training activities during the pandemic, many companies converted classroom training to virtual instructor-led training. For example, Rollins, LLC, converted all training for its leadership development program for Orkin branch and service manager trainees (Orkin provides residential and commercial pest control services).[102] Each class has an instructor and a producer. The instructor focuses on delivering the content and engaging learners. The producer sets up breakout rooms, monitors chats and reactions, and cues up videos. Key learning points emphasized in the program are summarized into two-minute bites that are shared post-training with the learners. To ensure that the program was effective, the training developers conducted quick polls with the class each day and then gathered for a debrief to make necessary changes to content, create quizzes for the next day, and make any adjustments to the schedule.

An advantage of distance learning is that the company can save on travel costs. It also allows employees in geographically dispersed sites to receive training from experts who would not otherwise be available to visit each location. The major disadvantages of distance learning are the potential lack of interaction between the trainer and the audience, technology failures, and unprepared trainers.

To engage trainees in a distance learning environment, it is useful to limit online sessions to 60 to 90 minutes in length, maintain a good instructional pace, avoid presenting unnecessary text, use relevant and engaging visuals (e.g., graphs and animation), and allow trainees to participate using polling devices and small-group breakout rooms for discussion and projects.[103] A group spokesperson can be assigned to summarize and communicate the group's ideas. Weather conditions and satellite glitches can occur at any time, disconnecting the instructor from the audience or making it difficult to show video or other multimedia presentations. Therefore, instructors need backup plans for dealing with technical issues. Because many instructors have difficulty speaking to trainees in another location without a live group of trainees in front of them, it is important to prepare instructors for distance delivery. For example, a producer who is familiar with the technology can work with the instructor and help facilitate the training session.

Technologies for Training Support: Artificial Intelligence, Expert Systems, and Performance Support

Technologies such as artificial intelligence, expert systems, and electronic performance support systems are being used to support training efforts. Both expert systems and electronic performance support systems are not new. However, recent developments in the field of artificial intelligence have revolutionized the types and the power of available training support and will likely continue to do so in the future. Training support means that these technologies are helping to capture training content so that it is available to employees who may not have attended training. Training support also means that these technologies provide information and decision rules to employees on an as-needed basis (i.e., they are job aids). Employees can access these technologies in the work environment.

Table 8.12 shows when training support technologies are most needed. Many conditions shown in the table relate to characteristics of the task or the environment that can inhibit transfer of training. For example, employees may work some distance away from their manager, the manager may be difficult to contact, or employees may need special expertise that the manager lacks. These situations make it difficult for employees to find answers to problems that arise on the job. Training support technologies can assist in transfer of training by helping employees generalize training content to the work environment and by providing employees with information not covered in training.

TABLE 8.12 Conditions When Training Support Technologies Are Most Needed

- Performance of task is infrequent.
- The task is lengthy, difficult, and information-intensive.
- The consequences of error are damaging.
- Performance relies on knowledge, procedures, or approaches that frequently change.
- There is high employee turnover.
- Little time is available for training, or there are few resources for training.
- Employees are expected to take full responsibility for learning and performing tasks.

Source: Based on A. Rossett, "Job Aids and Electronic Performance Support Systems," *in The ASTD Training and Development Handbook*, 4th ed., ed. R. L. Craig (New York: McGraw-Hill, 1996), pp. 554–77.

Artificial Intelligence

Artificial intelligence (AI) refers to a system such as a computer, a computer-controlled robot, or software that thinks intelligently like humans.[104] This includes mimicking how we reason, make decisions, ask questions, and determine value. AI is developed by studying how we think, learn, decide, and work while trying to solve a problem, and then using this information to build intelligent software and systems. For example, you may be familiar with Watson, the artificial intelligence–based computer who was able to beat the best human *Jeopardy!* players (including Ken Jennings, who won more consecutive episodes of the game show than anyone in history) by quickly extracting the correct answer from huge datasets of information.[105] Watson can understand natural language, including puns, slang, and jargon. It "learns" by reprogramming itself as more information is presented and it makes mistakes. Watson provides not one but multiple answers ranked by the probability they are correct. A pop-up window provides support for each answer. Watson has since been applied to providing financial advice, helping complete tax returns, providing entertainment, and treating cancer. For example, Watson helped IBM develop an adviser for oncologists who treat lung cancer. Watson was given more than 600,000 medical files and 2 million pages of medical journals and results of clinical drug trials. Doctors can ask Watson a question and Watson will provide treatment recommendations. Watson has also been used to curate the biggest sights and sounds from Wimbledon's tennis matches to create "Cognitive Highlights." The AI platform took key points from the tennis matches (like a player serving an ace at 100 mph), fans' cheers, and social media content to help create up to two-minute videos.

Table 8.13 shows examples of how AI is being used in training. Expert systems, machine learning, and chatbots are three specific ways AI is being used to provide personalization, coaching, and smart assistants.

TABLE 8.13 Examples of AI Training Applications

Personalization—Identify employee's knowledge and skill gaps and recommend courses or support tools
Evaluation—Determine how training is affecting business goals
Coaching & Smart Assistants—Promote content related to employee strengths and personality; provide employees with feedback and guidance
Translation—Real-time translation of training content into any language
Authoring—Write and create training content.

Sources: Based on J. Dillon, "The Path to AI," *T+D,* January 2020, pp. 24–29; T. Vojnovski, "Text Buddies: L&D Use Cases for Chatbots," *Chief Learning Officer,* May/June 2020, pp. 21–22, 53.

Machine learning and chatbots use AI to provide the training applications shown in **Table 8.13**. **Machine learning** refers to artificial intelligence systems that learn. The systems learn by applying algorithms to data to identify user trends and patterns that inform future suggestions and data searches.[106] In training and development, software can monitor what trainees do and how they engage with online training content and then "learn" what types of other training courses to suggest, when to provide training content, and what format (audio, video) trainees prefer. Machine learning can be used to create a more personalized and customized learning experience for trainees, similar to how Netflix and Spotify work for television and music, respectively. This helps motivate trainees to learn because the training content is more meaningful for them. It also reduces training time and costs by ensuring employees are receiving the training they actually need.

Chatbots refer to AI systems that create an automated personalized conversation or text chat with human users.[107] You may be familiar with chatbots if you have ordered a taco using the chatbot feature on Taco Bell's website or used Expedia's chatbot on Facebook to book a hotel room. Chatbots are being used to help facilitate transfer of training.[108] In training, chatbots can be used to provide trainees with messages reminding them of concepts they learned in training; send reminders about learning goals and ask about progress toward meeting those goals; ask learners about successes and difficulties in applying learning on the job; provide additional learning resources; and to quiz learners on course content. For example, in Kaiser Permanente Health Care Institute's "Growing Coaches" training program, trainees are provided a tool that allows them to interact with each other.[109] The tool includes a chatbot that weekly sends trainees messages, coaching tips, quizzes, short videos, and reminders of tasks that need to be completed as part of the program.

Electronic Performance Support Systems

An **electronic performance support system (EPSS)** is an electronic infrastructure that captures, stores, and distributes individual and corporate knowledge assets throughout an organization to enable individuals to achieve required levels of performance in the fastest possible time and with a minimum of support from other people.[110] An EPSS includes all the software needed to support the work of individuals (not just one or two specific software applications).

An EPSS can be used to help transfer of training and to provide just-in-time performance support that substitutes for training. Microsoft's Office software has "wizards," a help function that recognizes the task that the user is starting to perform (e.g., writing a letter) and offers information related to that task. Also, retailers such as Sephora are supplying employees with iPads that they can use as a product-reference guide (a performance support tool). Electronic Performance Support (EPSS) is embedded or linked to multiple systems within Huntington National Bank.[111] There are over 3,000 pages of content within 12 systems. EPSS is the default for new system implementations and is utilized when there are system releases or changes to the user interface. It provides employees with learning while they work to help them complete tasks while interacting with customers. This reduces time away from the job and eliminates the need for formal training events. Over 500,000 page hits have been made in the tool.

To use EPSS as a substitute for training, trainers must determine whether problems and tasks require employees to actually acquire knowledge, skills, or abilities (learned capabilities) and whether periodic assistance through an EPSS will be sufficient.

Learning Management Systems: Systems for Training Delivery, Support, and Administration

A **learning management system (LMS)** refers to a technology platform that can be used to automate the administration, development, and delivery of all of a company's training programs. LMSs can provide employees, managers, and trainers with the ability to manage, deliver, and track learning activities. Some of the features of LMSs are shown in **Table 8.14**. LMSs provide the ability for users to search the database and their company's intranet simultaneously for information on training courses; contact experts who are identified by the company as topic experts; enroll in all courses related to a certification or particular training topic at one time; and use simulations to determine whether employees are complying with ethical standards and skills that they have been trained in using by the LMS.[112]

There are a number of reasons LMSs are being used. An LMS can help a company reduce travel and other costs related to training, reduce time for program completion, increase employees' access to training across the business, and provide administrative capabilities to track program completion and course enrollments. LMSs allow companies to track all learning activity in the business.

TABLE 8.14 Features of LMSs

Trainee management and reporting	Track and report on trainee progress and activity.
Training event and resource management	Organize courses and learning events in catalogs; manage and track course resources such as classrooms and instructors; support communications among administrators and students.
Online course delivery infrastructure	Deliver online courses; register and track trainees.
Authoring tools	Create new courses; promote consistency in courses.
Skills assessment	Create, edit, distribute, and deliver assessment tests; review trainee achievements.
Professional development management	Track and compare trainee learning against goals, based on the trainee's job or function.
Knowledge bases	Integrate links to learning references that supplement online learning.
Personalization	Engage employees in learning through the use of target courses, references, and e-mails.
Link to human capital management systems	Link to performance management, career development, and talent management systems.

Sources: Based on A. Carlson, "Open the Door on Learning Management Systems," *T+D,* August 2019, pp. 69–72; S. Castellano, "The Evolution of the LMS," *T+D,* November 2014, p. 14; "Learning Management Systems: An Executive Summary," *training,* March 2002, p. 4.

Learning management systems are also important for human capital management. **Human capital management** integrates training with all aspects of the human resource function (e.g., performance evaluation, human resource planning) to determine how training dollars are spent and how training expenses translate into business dollars for the company. Some of the reasons that companies adopt an LMS are to centralize management of learning activities, measure training usage, measure employee performance, and help in talent management.[113]

LMSs are also important for companies to be able to track the number of employees who have completed courses that are required to meet state, federal, or professional regulations (compliance training).[114] These courses cover a wide range of topics, including financial integrity, health and safety, environmental protection, and employee rights. For example, various regulations mandate that companies be able to prove that employees have completed courses in sexual harassment or defensive driving. Employees from a variety of for-profit businesses, including financial services, oil refining, and pharmaceuticals, as well as employees in non-profit organizations such as government agencies and hospitals, have to complete certain required courses.

An LMS can help a company understand the strengths and weaknesses of its employees, including where talent gaps exist.[115] Also, an LMS can be linked to other human resource systems, such as performance management or employee development systems, to identify learning opportunities for employees to strengthen their performance weaknesses. To maximize its effectiveness, an LMS should be integrated with talent management systems. The interfaces between the systems should provide basic employee information such as business unit, geographic location, and job title. Information about which courses employees have completed and are eligible to complete should also be stored in the LMS.

Consider how IBM and Yum! Brands use LMS.[116] IBM uses a LMS that incorporates AI. The learning management system has the capability to identify relevant training courses for employees that fit their needs and career goals, organize and send learners feedback to trainers, and answer questions from employees. The learning management system also has an authoring tool that enables training designers and subject-matter experts to easily create, modify, and update content.

Restaurant company Yum! Brands is well known for its brands including KFC, Pizza Hut, and Taco Bell. It has over 48,000 restaurant locations and a global workforce of over 1 million associates in 145 countries. To maintain the quality and consistent products and customer service it is known for, Yum! Brands also needs high-quality and standardized training. To do so, it replaced eight-hour, instructor-led training courses with shorter e-learning sessions and serious games offered through its learning management system known as the "Learning Zone." The LMS allows for more employees to access and benefit from the training while also cutting costs. On the LMS, Yum! employees can take online programs and over 10,000 specific training courses that are unique to each of the three Yum! Brands. After completing training, employees are rewarded with a digital badge or points. In just six months, Yum! saw its employee training completion rates go from 15 to 79 percent. Yum! Brands wants to further develop the LMS to have more capability for course creation and stronger analytics to assist learning and business leaders.

Choosing New Technology Training Methods

Table 8.15 compares technology-based training methods based on the same characteristics used to compare traditional training programs in **Chapter Seven**. Several trends are apparent in this table. First, these methods require considerable investment in development. Development costs are related to purchasing hardware and software, as well as developing programs and transferring programs to new media (e.g., smartphones using apps). However, although development costs are high, costs for administering the programs are low. Advantages of these methods include (1) cost savings due to training being accessible to employees at their home or office, (2) reduced number of trainers needed, and (3) reduced costs associated with employees traveling to a central training location (e.g., airfare, food, and lodging). Moreover, most of the important characteristics needed for learning to occur (practice, feedback, etc.) can be built into these methods. Note that only a limited number of studies of the effectiveness of several methods (e.g., mobile learning, social networks, adaptive training, and MOOCs) are available.

Recall the discussion in **Chapter Six** of how to determine the costs and benefits of training programs. Caterpillar found that it spent approximately one-third as much for e-learning as for classroom instruction because of the reduced number of instructors, the lower costs associated with course materials, and the reduced travel expenses.[117] For a one-hour course with a class size of 100 trainees, e-learning is 40 percent less expensive than classroom training ($9,500 versus $17,062, or $76 per trainee). And, if the number of trainees is increased to, for example, 40,000 trainees (Caterpillar has more than 70,000 employees worldwide), the company's cost savings are 78 percent ($1.1 million versus $5 million, or $99 per trainee).[118]

You might assume that e-learning is superior to other methods, but this is not necessarily the case. Its major advantage is that web-based programs can offer collaboration and sharing (connecting trainees to other trainees, experts, and chat rooms) and links to resources available on the web. Web-based training also allows the learner to be given assignments requiring open-ended responses (e.g., write a report on a customer's needs) rather than only yes/no or multiple-choice responses. In web-based training, the instructor can read the assignment and provide detailed feedback. However no training method is inherently superior to other methods. Rather, for any method to be effective it has to create a positive learning environment and aid in training transfer. Face-to-face classroom instruction can be ineffective for the same reasons as online learning or distance learning. For example, the material may not be meaningful, there may be limited opportunities for practice, and managers may not support the use of training content on the job.

TABLE 8.15 Comparison of Technology-Based Training Methods

	Online E-Learning Web-Based Computer-Based	Computer-Based (No Internet)	Distance Learning	Adaptive Training
Learning Outcome				
Verbal information	Yes	Yes	Yes	Yes
Intellectual skills	Yes	Yes	Yes	Yes
Cognitive strategies	Yes	Yes	Yes	Yes
Attitudes	Maybe	No	No	No
Motor skills	No	No	No	Yes
Learning Environment				
Objective	High	High	High	High
Practice	High	High	Low	High
Meaningfulness	High	High	Medium	High
Feedback	High	High	Low	High
Interaction				
Learner-Content	High	High	Medium	High
Learner-Instructor	Medium	Low	Medium	High
Learner-Learner	Medium	Low	Medium	Low
Transfer of Training Cost	High	Medium	Medium	High
Development	High	High	Medium	High
Administrative	Low	Low	Low	Low
Effectiveness	High	Medium	Medium	?

	Simulations and Games	Augmented Reality	Mobile Learning	Social Media	MOOCs
Learning Outcome					
Verbal information	Yes	Yes	Yes	Yes	Yes
Intellectual skills	Yes	Yes	Yes	No	Yes
Cognitive strategies	Yes	Yes	No	Yes	Yes
Attitudes	Yes	No	No	No	No
Motor skills	Yes	Yes	No	No	No

	Simulations and Games	Augmented Reality	Mobile Learning	Social Media	MOOCs
Learning Environment					
Objective	High	High	High	Medium	High
Practice	High	Medium	Low	Medium	Medium
Meaningfulness	High	High	Medium	Medium	Medium
Feedback	High	High	Low	High	Medium
Interaction					
Learner-Content	High	High	Medium	High	High
Learner-Instructor	Medium	Medium	Low	Medium	Medium
Learner-Learner	High	High	Low	High	Medium
Transfer of Training Cost					
Development	High	High	Medium	Medium	High
Administrative	Low	Low	Low	Medium	Low
Effectiveness	High	?	?	?	?

How do new technology training methods relate to the traditional training methods discussed in **Chapter Seven**? Simulations and games and adaptive training are best suited for teaching complex processes related to operating machinery, tools, and equipment. Research shows that VR programs are better than other types of training programs for developing social skills [119]. Simulations (including VR), games, and adaptive training are extensions of role plays, business games, experiential learning, and team training. Online training and MOOCs are best suited for teaching facts, figures, cognitive strategies (e.g., how to hold an effective meeting), and interpersonal skills (e.g., closing a sale). These are technological extensions of lectures and role plays. Both online training and simulations can be useful for training interpersonal skills if the content and interactions are realistic. However, it is important that simulations, games, and online learning are used together with face-to-face instruction to ensure skills are learned and practiced in real work situations. Augmented reality and artificial intelligence are best used after learners have attended training, as part of a blended learning approach, or for performance support. Mobile learning is probably best suited for teaching facts due to the limited personal interaction and interaction with the content using many mobile devices. Currently, mobile learning and social media are best used as supplements to face-to-face instruction to facilitate learning and transfer of training. Social media are also good tools for knowledge management because they facilitate collaboration on documents, reports (wikis), and personal interaction (blogs, Twitter, and Facebook).

Although traditional training methods can be effective, managers and trainers should consider using new technology training methods under certain conditions:[120]

1. Sufficient budget and resources will be provided to develop and support the purchase and use of new technology.
2. Trainees are geographically dispersed, and travel costs related to training are high.
3. Trainees are comfortable using technology, including the Internet, the web, iPads, and smartphones.
4. The increased use of new technology is part of the company's business strategy.

5. New technology is being used or implemented in manufacturing of products or service processes.
6. Employees have limited or no time for training.
7. Current training methods allow limited time for practice, feedback, and assessment.
8. Use of new technology fits into the organizational culture or business strategy.

For example, software company Red Hat has experienced rapid growth, and they expect to grow even more in the coming years.[121] To ensure company expansion continues smoothly, senior leaders know they need strong managers. The current manager development program, M-Series, had been outdated by the rapid growth. Three weeks of instructor-led training courses spaced over 12 to 18 months was no longer realistic. More than half of Red Hat's current managers were not completing the program. These challenges were addressed by a complete overhaul of the M-Series program. The new program used social learning and technology platforms such as VR and simulation-based learning. By the end of its first year, participation in the program exceeded the company's intended goal, with more than 600 people managers enrolled in the program.

The best uses for classroom instruction may be when trainees need face-to-face interaction, instructor support, or visual cues. It is important to note that many companies recognize the strengths and weaknesses of both traditional training methods and technology-based training methods and are using both in a blended learning approach. Technology-based training methods including MOOCs can be used to provide consistent delivery of training content involving transfer of information (knowledge and skills) to geographically dispersed employees who work at their own pace, practice, and collaborate with the trainer and other trainees online. Then trainees can be brought to a central location for face-to-face training using traditional methods (classroom, action learning, games, and role play) that emphasize the application of the knowledge and skills through the use of cases and problems. Face-to-face instruction is also more useful for facilitating interaction among trainees as well as for collaboration, networking, and discussion.

Summary

This chapter provided an overview of the use of new technologies that are used for digital learning, learning support, and administration. Many new technologies have features that help ensure learning and transfer of training (e.g., e-learning). If designed correctly these technologies can create a positive learning environment by appealing to multiple senses and allowing employees to pace themselves, receive feedback and reinforcement, and find information from experts on an as-needed basis. Mobile learning, MOOCs, and online learning allow employees to participate in training from home or work on a 24-hour basis. Employees control not only the presentation of training content but also when and where they participate in training. Simulations and virtual reality also can create a more realistic training environment, which can make the material more meaningful and increase the probability that training will transfer to the job. Serious games make learning fun, competitive, and realistic. Augmented reality allows employees to learn while they are on the job. Artificial intelligence and electronic support systems are tools that employees can access on an as-needed basis to obtain knowledge and information. Social media help capture the knowledge that employees gain from training and facilitate their sharing of information. Learning management systems make it easier to store and record training information such as course enrollments and employee training records. This makes it easier for employees to participate in training and to retrieve training-related information for managerial decision making.

Most new technology training methods are superior to traditional methods in one way because they allow trainees to participate in courses at any time or place. However, similar to traditional training methods, technology-based training methods will be ineffective if they do not include interaction, feedback, practice, and other features of a positive learning environment. Considerations in choosing a training method include monies for development, geographic dispersion of employees, employees' difficulty in attending training, and whether new technologies are part of the company's business strategy. Rather than choosing between face-to-face and technology-based training methods, companies are often choosing to use both in a blended learning approach.

Key Terms

digital collaboration *329*
synchronous communication *329*
asynchronous communication *329*
Web 3.0 *330*
learner control *330*
computer-based training (CBT) *332*
online learning *332*
e-learning *332*
web-based training *332*
bandwidth *337*
rapid prototyping *339*
repurposing *339*
self-regulation *341*
hyperlinks *342*
massive open online courses (MOOCs) *342*
social media *344*
blog *344*
wiki *344*
microblogs *344*
microsharing *344*
shared media *344*
blended learning *347*
flipped classroom *347*
serious games *348*
virtual reality (VR) *348*
presence *348*
avatar *350*
augmented reality (AR) *352*
mobile learning *353*
podcast *353*
apps *354*
adaptive training *355*
distance learning *356*
web conferencing *356*
virtual classroom *356*
artificial intelligence (AI) *358*
machine learning *358*
chatbots *358*
electronic performance support system (EPSS) *359*
learning management system (LMS) *359*
human capital management *360*

Discussion Questions

1. Explain how technology has changed the learning environment.
2. What types of learning outcomes are best suited for mobile learning? Explain.
3. What are the differences between expert systems and electronic performance tools?
4. Why are MOOCs a promising way to deliver learning? What are their limitations?
5. Discuss how new technologies make it easier to learn. How do they facilitate transfer of training?
6. Is all Internet training the same? Explain.
7. What are some potential problems with using games and gamification for training?
8. What are social media? Explain how they can be used for training.
9. Explain learner control, sharing, and linking. How do they contribute to the effectiveness of e-learning?
10. What is repurposing? How does it affect the use of new technologies in training?

11. Distance learning can be used to deliver a lecture to geographically dispersed trainees. How might distance learning be designed and used to avoid some of the learning and transfer of training problems of the traditional lecture method?
12. Why would a company use a combination of face-to-face instruction and web-based training?
13. What is artificial intelligence (AI)? Provide an example of how AI can be used in training.
14. How does augmented reality (AR) differ from virtual reality?
15. Is AR most useful as a way to deliver training or as a way to support training? Explain your position.
16. What conditions are best for the use of social media tools as part of a learning solution?
17. What is the most important way adaptive training differs from other training methods?

Application Assignments

1. Using only the web, further investigate any training technology discussed in this chapter. With any search engine on the web conduct a search for information about the technology that you have chosen. Find information describing the technology, hints for developing or purchasing the technology, and examples of companies marketing and/or using the technology. Include web addresses in your summary.
2. Go to www.strivr.com/use-cases/operational-efficiency. Strivr is a company that provides immersive learning solutions. Read about Walmart's training and watch the video. What are the advantages of the training shown compared to traditional face-to-face instruction? Online learning? Is completing this training alone sufficient for an employee to know what to do or should a blended learning solution be used? Explain your answer.
3. Watch the video about MD Anderson's Oncology Expert Advisor at www.youtube.com/watch?v=CtyYI 7ou2B0. What are the benefits of such an expert system to oncology doctors? Are there any disadvantages? What benefits of expert systems are highlighted in this example?
4. Go to www.allencomm.com, a company that provides training solutions. Click on "Portfolio." Click on "Onboarding" Then review "Domino's Pizza," including the video. What features of serious games are shown in the video? Identify each feature and how it influences learning. Do you think this game is sufficient alone to train new employees how to make pizzas to Domino's standards? What might a blended learning solution using the game include?
5. Go to www.mzinga.com. Mzinga provides software solutions for learning. Click on and review "Omni Social Learning." Do you believe that these solutions are effective? Why?
6. Review examples of serious game at www.designingdigitally.com/portfolio/serious-games/vr-chop-and-drop-electrical-line-worker-serious-game and www.designingdigitally.com/portfolio/serious-games/coaching-champions-soft-skills-training. What are the advantages and disadvantages of the games shown in the video for learning? Transfer of training?
7. Go to https://assets.saba.com/uploads/resources/product-information/datasheet-learningwork/saba-learning-brochure.pdf. This describes the features of an LMS. How does a company benefit from this LMS? Can employees benefit, too? Explain.
8. Watch the videos of augmented reality training at BMW at www.youtube.com/watch?v=V0WrCf8PbEk and Siemens augmented reality training for power plant operators at www.youtube.com/watch?v=9aPo 6-imjTs. What is the potential value of augmented reality as shown in these examples? Do you think augmented reality is best used to replace or supplement other types of training that a service technician needs? Explain.

Case: *Training Customer Service Team Members at Valvoline Instant Oil Change*

Valvoline Instant Oil Change provides fast, drive-through oil changes completed in 15 minutes or less, as well as other preventative automotive maintenance services such as flushing the radiator or changing the drive belt. Valvoline Instant Oil Change is known for providing high-quality training as evidenced by being recognized seven times as a Best Award winner by the Association for Talent Development (including a #4 ranking in 2019).

Valvoline Instant Oil Change is experiencing rapid growth and currently has over 1,100 locations throughout the United States. The company wants to continue to provide exceptional customer service to satisfy customers and make them repeat clients. To do so, its talent development team wants to train its customer experience team on five critical elements for interacting with customers: Smiling when a customer arrives, waving when a guest leaves, opening car doors, introducing the manager, and responding "Happy to Help!" when a customer thanks them.

What technology-based training method would you recommend for training customer service team members? Why? Briefly describe the learning features you would include and why you recommend including them.

Sources: Based on "Who We Are," Valvoline Instant Oil Change, from https://jobs.vioc.com/#who-we-are, accessed January 29, 2021; "ASTD 2019 Best Award Winners: Valvoline Instant Oil Change," *T+D,* October 2019, p. 43.

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CHAPTER NINE

Employee Development and Career Management

Objectives

After reading this chapter, you should be able to

9-1 Discuss the steps in the development planning process.
9-2 Explain employee and company responsibilities in planning development.
9-3 Discuss current trends in using formal education for development.
9-4 Relate how assessment of personality type, work behavior, and job performance can be used for employee development.
9-5 Explain how job experiences can be used for development and suggest a job experience to match an employee's development goal or need.
9-6 Identify the characteristics of an effective mentoring program.
9-7 Describe the succession planning process and how the nine-box grid is used.
9-8 Design an effective onboarding process.

Employees Own Their Development at Danone Turkey

Danone Turkey is part of the French global food and beverage company Danone. Danone has over 100,000 employees in over 55 different countries. Their largest percentage of sales are made in the United States followed by China and France. Danone consists of three different companies that focus on nutrition, plant-based and dairy products, and waters. The company wants to be a major force in meeting consumer's demands for healthier and responsibly produced food and drinks. One of Danone's four pillars of what the company believes in ("Our Promise") is Growth, which highlights the importance and support for learning and development in the company. The other pillars focus on employees making the world healthier (Make an Impact); the importance of networks, relationships, and collaboration (People Centric); and valuing entrepreneurship and innovation (Step Out).

All of Danone Turkey's learning and development programs are based on employees' career aspirations, which are identified in yearly development conversations. Employees understand that they drive what they learn and where they want to go in the company, but their managers and the company's human resource and training professionals are available to support them. Each year, employees have development conversations with their managers. Managers are coached before they have the conversations to make sure they understand that their role is not to tell employees what to do, rather, their role is to help employees understand the time and effort it will take to reach their career aspirations and support them along the way. To reinforce employees' ownership of their development, in preparation for the development conversation, they are asked to identify their short- and long-term career goals, their strengths, and one area in which they want to improve. They are also asked to identify specific training and development opportunities they want to participate in during the year, positions or temporary assignments they are interested in, and if they are willing to relocate to another Danone location. Employees share this information with their manager prior to the development conversation.

During the development conversation, managers will share potential training or career opportunities the employee may be interested in. They work together to finalize the employee's development goals and activities for the next year. Managers do check-ins with employees during the upcoming year to see their progress and provide additional help if they ask for it. However, it is entirely up to the employees to work toward their development goals. Danone believes that by giving employees ownership for their own development, it has helped make them aware of the training and development opportunities offered by the company. These include on-the-job learning, mentoring, coaching, and online learning.

Sources: Based on S. Castellano, "Driven From Within," *T+D* (October 2019), pp. 74–77; "About Us," Danone, from www.danone.com/investor-relations/danone-at-a-glance/facts-and-figures.html, accessed February 1, 2021; "Our Promise," Danone, from https://careers.danone.com/en-global/our-promise, accessed February 1, 2021.

Introduction

As the Danone Turkey example in the chapter opener illustrates, companies who recognize the importance of employee development support the necessary processes for employees to grow, such as goal setting and development conversations. But, employees are expected to take the lead in shaping their development plan, activities, and career aspirations. Employee development is a necessary component of a company's talent management efforts. Talented employees expect support for development, otherwise they will look for opportunities with other companies. As we noted in **Chapter One**, "Introduction to Employee Training and Development," employee engagement is directly related to how employees are treated by their managers. Employee development can help increase employee engagement by (1) showing employees that the company is interested in their skill development and (2) developing managers who can create a positive work environment that makes employees want to come to work and contribute to company goals.

This chapter begins by discussing the relationship between development, training, and careers. Choosing an approach is one part of development planning. Second, before employees choose development activities, the employee and the company must have an idea of the employee's development needs and the purpose of development. Identifying the needs and the purpose of development are part of its planning. The second section of the chapter describes the steps of the development planning process. Employee and company responsibilities at each step of the process are emphasized. Third, we look at development approaches, including formal education, assessment, job experiences, and interpersonal relationships. The chapter emphasizes the types of skills, knowledge, and behaviors that are strengthened by each development method. The chapter concludes with a discussion of special issues in employee development, including succession planning, developing dysfunctional managers, and onboarding.

The Relationship Among Development, Training, and Careers

Development and Training

Development refers to formal education, job experiences, relationships, and assessments of personality and skills that help employees prepare for the future. Because it is future-oriented, it involves learning that is not necessarily related to the employee's current job.[1] **Table 9.1** shows the differences between training and development. Traditionally, training focuses on helping employees' performance in their current jobs. Development prepares them for other positions in the company and increases their ability to move into jobs that may not yet exist.[2] Development also helps employees prepare for changes in their current jobs that may result from new technology, new work designs, new customers, or new product markets. Development is especially critical for talent management, particularly for senior managers and employees with leadership potential (recall our discussion of attracting and retaining talent in **Chapter One**). Development is especially critical for ensuring that millennial employees are prepared to take baby boomers' leadership roles as they retire.[3] Companies report that the most important talent management challenges they face include developing existing talent and attracting and retaining existing leadership talent.[4] **Chapter Two**, "Strategic Training," emphasized the strategic role of training. As training continues to become more strategic (i.e., related to business goals), the distinction between training and development will blur. Both training and development will be required and will focus on current and future personal and company needs.

TABLE 9.1 Training versus Development

	Training	Development
Focus	Current	Future
Use of work experiences	Low	High
Goal	Preparation for current job	Preparation for changes
Participation	Required	Voluntary

Development and Careers

Traditionally, careers have been described in various ways.[5] A career can be described as a sequence of positions held within an occupation. For example, a university faculty member can hold assistant, associate, and full professor positions. A career also can be described in the context of mobility within an organization. For example, an engineer may begin her career as a staff engineer. As her expertise, experience, and performance increase, she may move through advisory engineering, senior engineering, and senior technical positions. Finally, a career can be described as a characteristic of the employee. Each employee's career consists of different jobs, positions, and experiences.

Today's careers are known as protean careers.[6] A **protean career** is based on self-direction, with the goal of psychological success in one's work. Employees take major responsibility for managing their careers. Consider the Florida real estate agent who left her job in real estate to capture pythons, which are large snakes.[7] After reading about one of the snakes exploding when it swallowed a six foot alligator, she decided she wanted to help remove pythons from areas around the Everglades where they were considered an invasive species. She made more money in real estate. But she feels her minimum wage paying job working for the Southern Florida Waste Management District python eradication program is more satisfying and is a way to give back to the community where she was raised. She believes her work is more important and exciting than selling real estate because it helps protect the animals and birds in the Everglades.

The protean career has several implications for employee development. The goal of the new career is **psychological success**: the feeling of pride and accomplishment that comes from achieving life goals (such as raising a family and having good physical health) that are not limited to achievements at work. The employee has more control over psychological success than traditional career goals, which are not only influenced by employee effort but are controlled by the availability of positions in the company. Psychological success is self-determined rather than solely determined through signals the employee receives from the company (like salary increases and promotions).

It is important for employees to develop new skills rather than rely on a static knowledge base. This has resulted from companies' need to be more responsive to customers' service and product demands. As we emphasized in **Chapter One**, learning is continuous, often informal, and involves creating and sharing knowledge. The emphasis on continuous learning has altered the direction and frequency of movement within careers (career pattern).[8] Traditional career patterns consisted of a series of steps arranged in a linear hierarchy, with higher steps related to increased authority, responsibility, and compensation. Expert career patterns involve a lifelong commitment to a field or specialization (such as law, medicine, or management). These types of career patterns will not disappear. Rather, career patterns involving movement across specializations or disciplines (a spiral career pattern) will become more prevalent. These new career patterns mean that developing employees (as well as employees taking control of their own careers) must be provided with the opportunity to (a) determine their interests, skill strengths, and weaknesses; and (b) based on this information, seek appropriate development opportunities that will likely involve job experiences and relationships as well as formal courses.

The most appropriate view of today's careers is that they are "boundaryless and often change."[9] Careers today include movement across several employers (also known as job hopping) or even different occupations. Job hopping is discussed in **Chapter Ten**, "Social Responsibility: Legal Issues, Managing Diversity, and Career Challenges." Studies have found that 25 percent of employees have held five jobs or more by age 35 and for employees 55 and older, 20 percent have held 10 jobs or more.[10] One-third of employers expect job hopping to occur, especially among new college graduates, but 40 percent of employers believe it becomes less acceptable when employees are in their mid-30s. The reality is that employees will be unlikely to stay at one company for their entire or even a significant part of their career. This means that companies and employees should add value to each other.[11] That is, regardless of how long employees stay, developing them can help the company adapt to changing business conditions and strategies by providing new skill sets and managerial talent. Development helps enhance employees' employability with their current and potential future employers. Also, development provides opportunities for all employees to grow their skills and use them in different ways, which has been shown to contribute to high levels of engagement and satisfaction.[12] Development can potentially reduce employees' job hopping because they do not feel they need to change employers to build their skill sets or gain valuable job experiences. For example, ESL Federal Credit Union's career counseling services encourages employees to proactively manage their career growth.[13] ESL provides several resources that employees can use. These resources include a self-service channel where employees can explore departmental career lattices, register for job shadowing, and get one-on-one coaching with a career coach who can help with resume building, interview skills, and career development planning. ESL also provides microinternships that allow employees to experience a new role to broaden their skill set and prepare for a potential future job opportunity. Providing the resources and microinternships has helped ESL maintain its 4 percent turnover rate and helped it fill 73 percent of open positions with current employees.

"Boundaryless" means that careers may involve identifying more with a job or profession than with the present employer. A career can also be considered boundaryless in the sense that career plans or goals are influenced by personal or family demands and values, passion, and purpose. One way that employees cope with changes in their personal lives, as well as in employment relationships, is to rearrange and shift their roles and responsibilities. Employees can change their careers throughout their life based on awareness of strengths and weaknesses, the perceived need to balance work and life, and the need to find purposeful and exciting work.[14] Career success may not be tied to promotions but to achieving goals that are personally meaningful to the employee rather than those set by parents, peers, or the company.[15] As we discuss later in the chapter, careers are best managed through employee-company partnerships that create a positive relationship through which employees are committed to the organization but can take personal control for managing their own careers to benefit themselves and the company.

For example, after graduating from college, Katlin Fox, 29, wanted to join a marketing team.[16] Instead, she took a job as an executive assistant—the only job she was offered. She was overwhelmed by the technical details of her job, which involved managing e-mail and scheduling for an executive at Suffolk Construction Company, but she wanted to do something that was more important. With her boss's help she decided to ask for new projects. The projects, which involved making the office more environmentally friendly, revising the company's operations manuals, and running an employee wellness program, made her interested in a career in human resources. Her boss began inviting her to share her insights in meetings and to run the meetings of a committee on work–life benefits when he was unable to attend. She even helped present the committee's recommendations to the company's leadership team, which included the chief executive officer. Her presentation was well-received, which positioned her for advancement. When her boss was promoted to a job in another location, he offered her a promotion to office manager at the new location. She turned him down but shared with him her goal to work in human resources. Now, she has a human resources management job. It hasn't been easy. Ms. Fox was initially uncomfortable wearing a hard hat and steel-toed shoes to work at field offices and she had to take courses to obtain human resource knowledge and skills that she was lacking. But she is happy with her new job and glad she took the initiative to find a new opportunity for herself.

One study suggests that companies are choosing to use one of four different career management approaches that reflect contemporary career patterns and different types of employment relationships (e.g., full-time employees, contract employees, and gig employment).[17] The *structured approach* prepares workers for moving through clearly defined career paths. Companies using this approach want to have a depth of talented employees and a stable plan for leadership succession. A *flexible approach* helps build breadth in employees' skills through encouraging lateral moves, job rotation, and job experiences yet still offers well-defined career paths. This helps ensure that employees get the skills they need but gives them the opportunity to explore multiple career options. In an *open approach* employees can choose to work on projects or assignments based on their career interests and skills they want to develop. This is the most flexible of the four approaches because employees can create personalized career paths. In the *transitory approach* companies focus on finding the best talent from outside of the organization, such as contract employees. Career management is entirely employee-driven. The company provides only compliance and company-specific training. Employees take responsibility for both determining the skills that will make them attractive hires and developing those skills.

Development and career opportunities can help provide companies with a competitive advantage through attracting and retaining the best employees. But development and career opportunities may not be available in many companies, and if they are, they are seen as ineffective. For example, consider that less than 50 percent of employees feel that their employer provides useful career planning tools or opportunities to advance.[18] Over 40 percent of high-performing employees would leave their company to advance their careers. This emphasizes that to retain and motivate employees, companies need to provide a system that helps them meet their talent development needs and supports their approach to career management. This is especially important to try to retain good performers and employees who have potential for managerial positions. A **development planning or career management system** refers to a system designed to retain and motivate employees by identifying and helping to meet their development needs. We discuss these systems next.

Development Planning Systems

Companies' development planning systems (also known as development planning processes) vary in the level of sophistication and the emphasis they place on different components of the process. Steps and responsibilities in the development planning system are shown in **Figure 9.1**.

Self-assessment

Self-assessment refers to the use of information by employees to determine their career interests, values, aptitudes, and behavioral tendencies. It often involves psychological tests such as the Myers-Briggs Type Indicator (a type of personality assessment described later in the chapter), the Strong–Campbell Interest Inventory, and the Self-Directed Search. The Strong–Campbell helps employees identify their occupational and job interests; the Self-Directed Search identifies employees' preferences for working in different types of environments (like sales, counseling, and landscaping). Tests may also help employees identify the relative values they place on work and leisure activities. Keep in mind that any person (e.g., a trainer or consultant) using and interpreting psychological tests or other types of assessments should be qualified and trained to do so.

Through the assessment, a development need can be identified. This need can result from gaps between current skills and/or interests and the type of work or position the employee wants. For example, Tech Mahindra, a global provider of digital transformation and IT services to large companies, uses artificial intelligence to help employees identify and choose their career paths.[19] Upskilling as a Service (UaaS) platform recommends possible career paths employees can choose based on their current skills and available job opportunities. After employees choose a career path, they can access online learning customized for their chosen path content and assessments. UaaS also includes a software solution that helps employees match their skills with job opportunities within the company. This helps employees further develop their skills by getting involved in projects.

FIGURE 9.1 Steps and Responsibilities in the Development Planning Process

	Self-Assessment →	Reality Check →	Goal Setting →	Action Planning
Employee responsibility	Identify opportunities and needs to improve.	Identify what needs are realistic to develop.	Identify goal and method to determine goal progress.	Identify steps and timetable to reach goal.
Company responsibility	Provide assessment information to identify strengths, weaknesses, interests, and values.	Communicate performance evaluation, where employee fits in long-range plans of the company, changes in industry, profession, and workplace.	Ensure that goal is SMART (specific, measurable, attainable, relevant, and timely); commit to help employee reach the goal.	Identify resources employee needs to reach goal, including additional assessment, courses, work experiences, and relationships.

Reality Check

Reality check refers to the information employees receive about how the company evaluates their skills and knowledge and where they fit into the company's plans (e.g., potential promotion opportunities, lateral moves). Usually, this information is provided by the employee's manager as part of the performance appraisal. Some companies also use the 360-degree feedback assessment, which involves employees completing a self-evaluation of their behaviors or competencies while their managers, peers, direct reports, and even customers also provide evaluations of them. The concept of 360-degree feedback is discussed later in the chapter.

It is not uncommon for managers to hold separate performance appraisals and development discussions. Discussing performance and development in the same meeting is difficult because they have different objectives. Performance appraisal discussions are focused on an employee's job performance during a defined period of time (such as six months or a year) and usually involve a discussion of what financial incentives or pay increases the employee can expect to receive as a result of performance. Development discussions do not involve pay or rewards. They focus on discussing an employee's values and career interests, the strengths and weaknesses of their skills or competencies, and how to capitalize on their strengths and develop their weaknesses. The employee and the manager then identify and agree on realistic short- and long-term development goals (responsibilities or positions that the employee can achieve).[20]

For example, UL, a safety certification company, helps provide employees with a reality check through its Navigate myCareer approach.[21] Navigate myCareer includes ongoing discussions and feedback between employees, managers, and their peers. Each month, UL's learning and development team releases new training modules and resources to help managers and employees gain the skills they need to have successful discussions. For example, some of the monthly offerings have included a coaching program for managers and conversation guides to help managers and employees have effective development discussions.

Goal Setting

Goal setting refers to the process of employees developing short- and long-term development objectives. These goals usually relate to desired positions (such as becoming sales manager within three years), level of skill application (use one's budgeting skills to improve the unit's cash flow problems), work setting (move to corporate marketing within two years), or skill acquisition (learn how to use the company's human resource information system). These goals are usually discussed with the manager and written into a development plan. A development plan for a product manager is shown in **Figure 9.2.** Development plans usually include descriptions of strengths and weaknesses, career goals, and development activities for reaching the career goal. An effective development plan focuses on development needs that are most relevant to the organization's strategic objectives.

Consider Just Born's Career Development Process (CDP), which is used by employees to identify their career path within the company and ready themselves for their next position.[22] The development plan involves identifying both short- and long-term career goals. Employees commit to two goals to help them progress in their career. Just Born provides a competency dictionary on the company's intranet that can be used for identifying development needs. The CDP gives both employees and their managers the opportunity to discuss future career plans and becomes a reality check by raising expectations and increasing performance standards. Employees initiate the CDP by first defining future job interests, identifying work experiences that help prepare for the future job, and establishing the long-term career goal. The CDP is then discussed with the employee's manager. The manager can support the CDP or suggest changes. If employees' future job interests are outside their current department, the interests are communicated to the manager of that department.

FIGURE 9.2 **Development Plan**

<table>
<tr><td>Name:</td><td>Title: Project Manager</td><td>Development</td></tr>
<tr><td colspan="3">Competencies
Please identify your three greatest strengths and areas for improvement.
Strengths
• Strategic thinking and execution (confidence, command skills, action orientation)
• Results orientation (competence, motivating others, perseverance)
• Spirit for winning (building team spirit, customer focus, respect colleagues)</td></tr>
<tr><td colspan="3">Areas for Improvement
• Patience (tolerance of people or processes and sensitivity to pacing)
• Written communications (ability to write clearly and succinctly)
• Overly ambitious (too much focus on successful completion of projects rather than developing relationships with individuals involved in the projects)</td></tr>
<tr><td colspan="3">Development Goals
Please describe your overall career goals.
• Long-term: Accept positions of increased responsibility to a level of general manager (or beyond). The areas of specific interest include but are not limited to product and brand management, technology and development, strategic planning, and marketing.
• Short-term: Continue to improve my skills in marketing and brand management while utilizing my skills in product management, strategic planning, and global relations.</td></tr>
<tr><td colspan="3">Next Assignments
Identify potential next assignments (including timing) that would help you develop toward your goals.
• Manager or director level in planning, development, product, or brand management. Timing estimated to be spring 2023.</td></tr>
<tr><td colspan="3">Training and Development Needs
List both training and development activities that will either help you develop in your current assignment or provide overall development.
• Master's degree classes will allow me to practice and improve my written communications skills. The dynamics of my current position, teamwork, and reliance on other individuals allow me to practice.</td></tr>
<tr><td>Employee ___________________
Immediate Manager _________
Mentor _____________________</td><td>Date _______________
Date _______________
Date _______________</td><td></td></tr>
</table>

Rapid7, a software development company with 1,300 employees, uses VR headsets to create an interactive game experience based on adapting the game *National Geographic Explore VR*.[23] The experience helps managers learn to engage employees in career conversations and educate them about career paths. Managers work in pairs crossing a large ice glacier as either the climber (employee) or the coach (manager). As they move, they answer questions designed to help the coaches identify a strategy to move their employees closer to their individual climbing destination (career goals). At the game's conclusion, managers debrief each other and view recap videos. Since making the experience available to its managers, Rapid7 has seen an over 10 percent decrease in career advancement being mentioned in exit interviews as the primary reason for leaving the company.

Action Planning

During this phase, employees complete an action plan. An **action plan** is a written strategy that employees use to determine how they will achieve their short- and long-term career goals. Action plans may involve any one or combination of development approaches discussed later in the chapter (such as enrolling in courses and seminars, getting additional assessment, obtaining new job experiences, or finding a mentor or coach).[24] The development approach used depends on the needs and developmental goal. Wells Fargo's online site, known as iDevelop, helps employees prioritize their development needs and create development plans.[25] Employees use the site to identify their competencies. They use the competencies they consider as strengths to choose development activities, including training programs and online resources.

Examples of Career Development Systems

Effective career development systems include several important features (see **Table 9.2**). One feature is a development plan like the one shown in **Figure 9.2**. An effective development plan is simple, clear, and realistic and focuses on developmental needs that are most relevant to both the individual's career and the organization's strategic objectives.[26]

TABLE 9.2 Design Factors of Effective Development Systems

1. The system is positioned as a response to a business need or to support the business strategy.
2. Employees and managers participate in developing the system.
3. Employees are encouraged to take an active role in career management and development.
4. Evaluation is ongoing and used to improve the system.
5. Business units can customize the system for their own purposes (with some constraints).
6. Employees have access to development and career information sources (including advisers and positions available).
7. Senior management and the company culture support the development system.
8. The development system uses competencies, skills, and behavior that are common to the company's other human resource practices, including performance management, training, and recruiting.
9. The development system is linked to other human resource practices, such as performance management, training, and recruiting systems.
10. A large, diverse talent pool is created.
11. Development plans are completed by all employees.
12. Talent evaluation information and development plans are available and accessible to all managers.

Sources: Based on S. Prokesch, "Reinventing Talent Management," *Harvard Business Review* (September–October 2017), pp. 54–55; P. Asinof, "IDPs: Talent Development's Superglue," *T+D* (January 2016), pp. 42–47; B. Conaty and R. Charan, *The Talent Masters* (New York: Crown Business, 2010); and D. Hall, *Careers In and Out of Organizations* (Thousand Oaks, CA: Sage, 2002).

For example, Procter & Gamble's promotion-from-within policy is supported by the development plans completed by every employee.[27] These plans identify what type of experience the employee needs and the next job—as well as future jobs—they might hold. Employees post their résumés online to show managers the skills they are building as well as to communicate whether they are willing to take a different job. At monthly meetings for each business unit, employee career paths and résumés are reviewed.

Consider the career management and development systems at Penn Station, 3M, and Genentech.[28] Penn Station, a restaurant chain that specializes in sub sandwiches, provides employees with the My Penn Path development tool. Employees use My Penn Path to see the skills needed for each level of employment at the company and to identify how they can learn those skills. Print media, video and online learning, and experiences on the job are used in programs that develop the skills employees need.

3M has been around for nearly 100 years using science and innovation to provide consumer products, such as tape, Post-It notes, bandages, and sandpaper, as well as business products, such as various types of films, filters, and wound care dressings. 3M considers all employees as leaders and so it provides development opportunities at each stage of their careers. 3M strives to engage all employees by focusing on their career and development desires. In fact, one of 3M's sustainability objectives is that all of its global workforce (90,000 employees in 70 countries) will be actively involved in development opportunities by 2025!

Each year all 3M employees create or update their development plans, which includes developing short- and long-term career goals. All employees are encouraged to continuously learn and improve their skills. 3M's tuition reimbursement program encourages employees to seek education in order to meet current job responsibilities and to help prepare for career changes or advance in their chosen career paths. For many functional areas, competency models are available and provide links to relevant training opportunities and development recommendations; employees and their supervisors discuss and agree on recommendations for growing a selected competency through on-the-job activities or social learning through a coach or mentor.

Because 3M believes leadership development provides a competitive advantage, it has invested in multiple leadership development programs offered for different stages in an employee's career. Business and leadership courses are available to employees at any level, including online programs available to all of 3M's global employees. 3M emphasizes diversity, collaboration, and inclusion in all of its leadership programs. Leadership programs are based on key leadership behaviors, which are linked to leaders' performance evaluations. For example, one leadership development program, 3M Leadership Way, has four levels: Spark, Ignite, Amplify, and Catalyst. Spark is targeted to junior 3M leaders who have been identified as having high potential. Ignite participants are new managers who are learning their role. Training on how to build effective teams is provided using gamification and virtual technology. Managers complete a project to show the impact of learning and applications in their daily work. In Amplify, leaders of multiple teams work on projects, visit customers, and work on their skills for nine months. Catalyst is a year-long program in which leaders attend leadership meetings; gain exposure to perspectives outside of 3M, including customers; and work on a project that focuses on either a challenge issued by top management or an issue or opportunity, a customer-based project to help solve their needs, or a community-based project. All of the levels include self-assessment of competencies as well as 360-degree feedback and coaching (both of which are discussed later in the chapter).

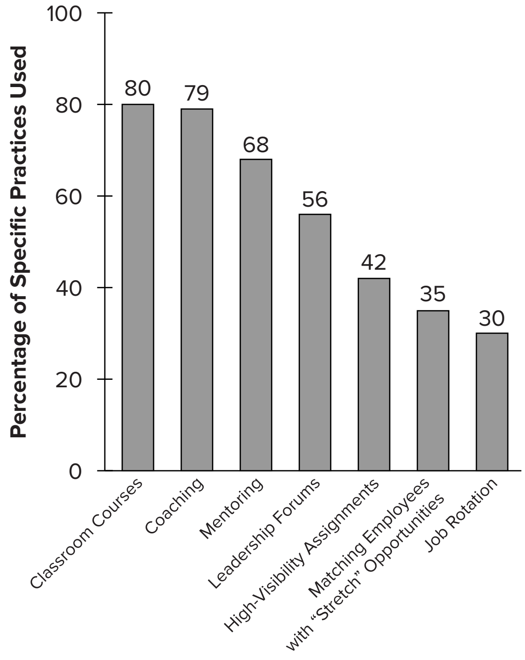
Genentech Inc., a biotechnology company, developed CareerLab to help its employees perform well in their current jobs and to provide opportunities for job enrichment and lateral career moves. CareerLab is a physical and virtual place where employees can consider their skill strengths and weaknesses and their interests and take ownership of their development. CareerLab includes the opportunity to get career advice from consultants, participate in LearningLabs (webinars and class sessions that cover different topics such as networking for career growth and managing your personal brand), receive mentoring, and attend career workshops. CareerLab also provides access to online career resources, including assessments that cover personal style, values, skills, strengths, and interests. Genentech has found that employees who use CareerLab have a high level of engagement with their work, better career conversations with their managers, a greater likelihood of staying with the company, and improved productivity.

Approaches to Employee Development

Four approaches are used to develop employees: formal education, assessment, job experiences, and interpersonal relationships.[29] Many companies use a combination of these approaches. **Figure 9.3** shows the frequency of use of different employee development practices. High visibility assignments and stretch opportunities included in **Figure 9.3** are both considered developmental job experiences. Asurion provides insurance for smartphones, tablets, consumer electronics, appliances, satellite receivers, and jewelry.[30] Asurion uses a variety of development approaches including group discussion, peer observation, formal coaching and mentoring, and formal classroom instruction. The retailer, Gap, has development programs that include online training, coaching, job experiences, and monthly development discussions.

Regardless of the approach used to ensure that development programs are effective, the programs should be developed through the same process used for training design: assessing needs; creating a positive development environment; ensuring employees' readiness for development; identifying the objectives for development; choosing a combination of development activities that will help achieve the objectives; ensuring that the work environment supports development activities and the use of skills and experiences acquired; and evaluating the program. To determine the development needs of an individual, department, or company, an analysis of strengths and weaknesses needs to be completed so that appropriate development activities can be chosen. Many companies have identified key competencies for successful managers. Recall from the discussion in **Chapter Three**, "Needs Assessment," that competencies are areas of personal capability that enable employees to successfully perform their jobs. Competencies can include knowledge, skills, abilities, or personal characteristics.

FIGURE 9.3 **Frequency of Use of Employee Development Practices**



Source: Based on EFMD, Network of Corporate Academies, Society for Human Resource Management, "Leadership Development: The Path to Greater Effectiveness" (2016), from www.shrm.org, accessed February 1, 2021.

Voya Financial's goal is to become "America's retirement company."[31] It helps customers plan, invest, and protect their savings for retirement. The company serves more than 13 million customers and has received numerous awards for being an ethical company and a desirable place to work. To ensure that Voya is a customer-focused financial company with high ethical standards, the company has taken steps to align its financial strategy with a leadership development strategy that supports its culture of continuous improvement and corporate values. To do so Voya first identified the core leader behaviors that align with its mission and values. The core leader behaviors include demonstrating integrity, leading with a passion and clarity, and delivering continuous improvement through talent development and customer service. Next, considering the core leadership behaviors, Voya designed leadership programs for leaders at all levels of the company. Three courses focus on change management, situational leadership, and performance management. In the performance management course, leaders learn how to identify their personal shortcomings to effective communications and develop skills to help them enhance their ability to provide feedback and coaching, recognize and reward effective performance, and create a more inclusive and collaborative culture. Another course covers how to create an environment that demonstrates value, respect, and fair treatment for all customers and employees. The 6P workshop for managers emphasizes how to lead through continuous improvement by using purpose, people, performance, process, partnership, and problem solving.

Keep in mind that although much development activity is targeted at managers, all levels of employees may be involved in development. For example, most employees typically receive a performance appraisal (an activity that can be used for assessment) at least once per year. As part of the appraisal process, they are asked to complete individual development plans outlining (1) how they plan to change their weaknesses and (2) their future plans (including positions or locations desired and education or experience needed). In the next section, we explore the different types of development approaches.

Formal Education

Formal education includes off-site and on-site programs designed specifically for the company's employees, short courses offered by consultants or universities, executive MBA programs, and other advanced degree programs. These programs may involve lectures by business experts, business games and simulations, adventure learning, and meetings with customers.

Formal Education Programs

Formal education programs include short courses offered by consultants or universities, leadership development programs, executive MBA programs, and other graduate degree programs. Many companies rely primarily on in-house programs offered by their training and development team or corporate universities, rather than sending employees to programs offered by universities.[32] Companies rely on in-house programs because they can be tied directly to business needs, can be easily evaluated using company metrics, and can get senior-level management involved. Most formal education programs actively involve the employees in learning. Separate programs are usually offered for supervisors, middle managers, and executives. Special programs for particular jobs (such as programs for engineers) are also available.

Leadership development programs are prevalent types of formal education programs. Consider the leadership development program offered by MasTec Utility Services.[33] The "Leadership Excellence and Development" program (LEAD) has four tiers each including a one-year curriculum. The first tier, The Employee Development Program (EDP), is designed for individual contributors. It is a foundational curriculum that provides leadership training and coaching. The second tier, The Supervisor Development Program (SDP), builds upon the EDP curriculum for supervisors and provides people management skills. The third tier, the Advanced Development Program (ADP), is designed for managers who have the ability and potential for director or vice president positions. The fourth tier, The Professional Development Program (PDP), is a competitive program for sponsored leaders as part of the company's succession planning. These leaders are being developed for executive positions within the next one to two years. Each tier within LEAD consists of online learning, instructor-led training, and hands-on practice exercises to be applied while on the job. All participants receive a mentor to guide them through the program. After participants complete a tier, they are eligible to enroll in the next one.

Deltek, a company that provides solutions and services for project-based businesses, has 3,000 employees in 22 locations around the world.[34] Deltek believes that the development of every employee is important for the company's success. As a result, it has formal education programs for directors, managers, and individual contributors. The programs are shown in **Table 9.3**.

TABLE 9.3 **Leadership Programs at Deltek**

Program	Level	Program Length	Summary
Leadership Engagement with Awesome People (LEAP)	Director	4 Months (No more than 17 participants	Focus on proactive strategic thinking and teamwork. Includes online self-directed learning, social networking with senior leaders, senior leaders provide challenge project and participants present their solutions.
Leadership Accelerator Management Program (LAMP)	Manager	6 Months	Focus on management competencies, recruitment practices, performance management, leading and building teams. Includes self-directed learning, reflection, and debriefs with senior management.
Leadership Exploration and Discovery (LEAD)	Individual Contributor	30 Days	Focuses on company values which include collaboration, success for customers, innovation, driving results. Includes a self-directed curriculum, reflection, and goal setting.
LEAD 2	Team Leads	2 Times Each Year (Small groups)	Emphasizes how to facilitate team productivity through project management and coaching. Includes role plays for practice, sharing feedback with each other, mentoring from managers, senior leader as a speaker

Sources: Based on Based on J. Atkinson, "Growth and Leadership," *TD* (June 2020): 22–24; "LEAD2019 Recognizes Deltek for the Second Year in a Row for its Leadership Development Programs" (May 8, 2019) from www.deltek.com/en/about/media-center, accessed February 2, 2021.

General Electric (GE) offers a two-year digital technology leadership development program for individuals with bachelor's degrees in majors such as computer science, computer engineering, and software engineering.[35] Program participants work within a GE business alongside experts in various locations. They complete four, six-month rotational assignments within a business covering diverse projects including those in data analytics, information technology operations, and software development. They also attend instructor-led training focusing on business, technical, and leadership skills.

Some companies are partnering with universities to design customized leadership development programs and graduate degrees. Companies are doing so to ensure that the leadership programs or degrees meet the business needs while capitalizing on the strengths that university faculty can offer. For example, Vi is a company that owns and operates continuing care residential communities for older adults across the United States.[36] It competes for talent with luxury hotel brands and large health-care systems. To attract and retain talent, Vi relies on employee development. Vi's Breakthrough Leadership is the company's leadership development program for experienced leaders who have the potential to move into a higher level position or take on additional responsibility. The program includes assessments, coaching, classroom and online learning, and virtual study groups. Vi partners with DePaul University to help deliver parts of Vi's Breakthrough Leadership program and develop measures used to evaluate the program.

EY, an accounting and consulting company, has a partnership with Hult International Business School to offer a management degree.[37] The technology-focused degree can be completed for free by employees. EY decided to enter into the partnership because it felt that new MBA. hires did not have the technology and data science skills that its clients wanted. To earn the degree, employees must earn 16 badges by completing courses in data science, cybersecurity, leadership, and other business topics, as well as a final project. It takes approximately 300 hours to complete the degree, which involves online learning and demonstrating applications of what was learned in the courses.

Executive Education

A number of institutions in the United States and abroad provide executive education, including Harvard, Stanford, Columbia, INSEAD, Michigan, and Ohio State University. Executive education includes executive MBA programs, as well as specialized curriculum on topics such as leadership, entrepreneurship, change, innovation, and global business.[38] Executive education programs typically involve a blended learning approach (blended learning was discussed in **Chapter Eight**, "Technology-Based Training Methods"). This means that managers visit campus for face-to-face instruction and, between sessions, work online on assignments such as team projects, cases, or reading assignments.

For over 50 years, the Center for Creative Leadership has been offering leadership development and executive education programs for individuals, teams, managers, and executives.[39] At the Center for Creative Leadership, managers who attend a development program take psychological tests; receive feedback from managers, peers, and direct reports; participate in group-building activities (like adventure learning, discussed in **Chapter Seven**); receive counseling; and set improvement goals and write development plans.

Tuition Reimbursement

Enrollment in executive education programs or MBA programs may be limited to managers or employees identified to have management potential. As a result, many companies also provide tuition reimbursement as a benefit for all employees to encourage them to develop on their own. **Tuition reimbursement** refers to the practice of reimbursing employees' costs for college and university courses and degree programs. One estimate is that 51 percent of employers offer a tuition benefit for undergraduate courses.[40] Typically, the course or program of study has to relate to the employee's job, employees have to stay with the company for a certain time period after completing the course or risk having to repay all or some of the reimbursed tuition, and the percentage of reimbursed tuition is based on the grade the employee receives (e.g., for a B grade an employee receives 90 percent reimbursement).[41] The Internal Revenue Service (IRS) has established a $5,250 tax-free maximum annual reimbursement limit that most companies use. Companies that have evaluated tuition reimbursement programs have found that the programs increase employee retention rates and readiness for promotion and improve job performance.[42]

The Granite Group, a wholesale plumbing business, offers tuition assistance for full-time employees.[43] Employees must stay for at least one year after completing their education or pay back the tuition costs. Because the company has begun requiring college degrees for certain roles, more employees are taking advantage of the benefit.

Lockheed Martin, the aerospace, defense, and advanced technologies company, updated its tuition assistance policy to include both degree-based courses and coverage of certificate programs.[44] The company made the change because over half of its jobs require STEM skills but not a college degree. To determine the certifications to pay for through the tuition reimbursement policy, talent development leaders compared their current policy with those of other companies in their industry, investigated what courses were eligible for certification in other industries, and asked engineering and operation executives at Lockheed to identify what STEM skills they most needed. As a result, Lockheed will pay for employees to obtain 150 nondegree certifications in areas such as information security architecture and Linux Software language.

Assessment

Assessment involves collecting information and providing feedback to employees about their behavior, communication style, or skills.[45] The employees, their peers, managers, and customers may provide information. Assessments are used for several reasons. First, assessment is most frequently used to identify employees with managerial potential and to measure current managers' strengths and weaknesses. Assessment is also used to identify managers with the potential to move into higher-level executive positions, and it can be used with work teams to identify the strengths and weaknesses of individual team members and the decision processes or communication styles that inhibit the team's productivity. Assessments can help employees understand their tendencies, needs, the type of work environment they prefer, and the type of work they might prefer to do.[46] This information, along with the performance evaluations they receive from the company, can help employees decide what type of development goals might be most appropriate for them (e.g., a leadership position or an increase in the scope of their current position). Popular assessment tools include personality tests and inventories, assessment centers, performance appraisal, and 360-degree feedback systems.

Personality Tests and Inventories

Tests are used to determine if employees have the personality characteristics necessary to be successful in specific managerial jobs or jobs involving international assignments. They are used to help employees gain self-awareness of how they respond to conflict, what motivates them, how they solve problems, and how they react to stress. Some personality tests such as the NEO Personality Inventory (or the NEO-PI) measure openness to new experiences, conscientiousness or dependability, emotional stability, assertiveness, and the ability to get along with other people. For example, Carmeuse North America uses personality tests in its leadership development program. The personality tests for employees who have been identified as having high potential for top management positions are used to guide employees into development activities, including coaching and formal courses.[47] Starwood Vacation Ownership, a subsidiary of Starwood Hotels and Resorts, uses several assessment tools to determine if its top managers value the commercial success of the business, as well as tolerance for ambiguity, the ability to create and communicate a business strategy, the ability to build business partnerships, and the ability to develop staff. The assessment identifies managers who are ready for international assignments, may not fit their current position, or need coaching to better understand the company culture.[48] CareSource, a Medicaid-managed care provider based in Dayton, Ohio, has a defined process for identifying and developing employees who have the potential to be strong leaders and effective managers.[49] Assessment of fit with the organizational values and culture, which emphasize serving the underserved, begins with the recruiting process. The company uses multiple assessment tools to evaluate managers' competencies (recall our discussion of competencies in **Chapter Three**). These assessments include the Myers-Briggs Type Indicator or MBTI (discussed next); the Gallup's StrengthsFinder to identify managers' strengths and develop plans for using their strengths with their employee team; and the Leadership Practices Inventory, which provides managers with an idea of their leadership skills as evaluated by peers, their boss, and their own self-assessment and is used to build a personal leadership development plan. Also twice a year, using the performance management system, managers are evaluated on competencies and behavior that CareSource believes are characteristics of an effective leader and manager: service orientation, organizational awareness, teamwork, communications, and organizational leadership. Based on the assessment results, managers with high leadership potential are encouraged to participate in a variety of development activities.

Three frequently used assessment tools are StrengthFinders, DiSC, and the MBTI. These tools can be used to help employees better understand how to adapt and change their behavior to be a more effective leader or team member. These tools can be used to place employees in job experiences they will be most successful in, give them experiences that will require them to adapt their behavior or personality, or assign a mentor or coach who can help them learn how to adapt to different situations. StrengthsFinders is an assessment that measures patterns of thoughts, feelings, and behaviors to identify areas where the individuals have the best chance for building on their strengths. Signature Consultants uses StrengthsFinder assessments for all employees.[50] Employees receive coaching to help them understand the results and use them to find career paths that align with their strengths and interests. The DiSC measures personality and behavioral style, including dominance (direct, strong-willed, forceful), influence (sociable, talkative), steadiness (gentle, accommodating), and conscientiousness (private, analytical).[51] See www.discprofile.com for more information on DiSC. Guckenheimer, a corporate restaurant management and catering company, has its managers complete DiSC to understand their communication style.[52] Then, managers complete training to develop their skill in adjusting their communication style to improve their interactions with their employees.

The **Myers-Briggs Type Inventory (MBTI)** refers to an assessment that is based on Carl Jung's personality type theory. This theory emphasizes that we have a fundamental personality type that shapes and influences how we understand the world, process information, and socialize. The assessment determines which one of sixteen personality types fits best. The 16 unique personality types are based on preferences for introversion (I) or extraversion (E), sensing (S) or intuition (N), thinking (T) or feeling (F), and judging (J) or perceiving (P). The assessment tool identifies an individual's preferences for energy (introversion versus extroversion), information gathering (sensing versus intuition), decision making (thinking versus feeling), and lifestyle (judging versus perceiving).[53] Each personality type has implications for work habits and interpersonal relationships. For example, individuals who are introverted, sensing, thinking, and judging (known as ISTJs) tend to be serious, quiet, practical, orderly, and logical. These persons can organize tasks, be decisive, and follow through on plans and goals. ISTJs have several weaknesses, however, because they do not tend to use the opposite preferences: extroversion, intuition, feeling, and perceiving. These weaknesses include problems dealing with unexpected opportunities, appearing too task-oriented or impersonal to colleagues, and making overly quick decisions.

Hallmark Cards has helped people express their feelings and celebrate important events and occasions for over 100 years.[54] Hallmark executives want to change the company's culture from that of a manufacturing company focused on developing products to a consumer-based company focusing on engaging its key customers. It recognizes the importance of developing leaders that can view situations from different perspectives, provide support to each other and work together, inspire employees, and efficiently implement new ideas. To help make this cultural shift, Hallmark Cards is using the MBTI to help managers increase their self-insight into how their actions and communications are perceived by other employees and managers, as well as how they tend to interact in teams and their work and leadership styles.

Hallmark Cards has realized several positive results from using the MBTI. The speed of managers' decision making and clarity of communications to employees have improved. There has been a noticeable improvement in employees feeling comfortable expressing their thoughts and managers communicating in ways that appeal to all employee types.

Assessment Center

At an **assessment center**, multiple raters or evaluators (assessors) evaluate employees' performance on a number of exercises.[55] An assessment center is usually an off-site location such as a conference center. Six to twelve employees usually participate at one time. Assessment centers are primarily used to identify if employees have the personality characteristics, administrative skills, and interpersonal skills needed for managerial jobs. They are also increasingly being used to determine if employees have the necessary skills to work in teams.

The types of exercises used in assessment centers include leaderless group discussions, interviews, in-baskets, and role plays.[56] In a **leaderless group discussion**, a team of five to seven employees is assigned a problem and must work together to solve it within a certain time period. The problem may involve buying and selling supplies, nominating a subordinate for an award, or assembling a product. In the **interview**, employees answer questions about their work and personal experiences, skill strengths and weaknesses, and career plans. The **in-basket** is a simulation of the administrative tasks of the manager's job. The exercise includes a variety of documents that may appear in the in-basket, e-mail, or on a manager's desk. The participants read the materials and decide how to respond to them. Responses might include delegating tasks, scheduling meetings, writing replies, or completely ignoring the memo! **Role plays** refer to the participant taking the part or role of a manager or other employee. For example, an assessment center participant may be asked to take the role of a manager who has to give a negative performance review to a subordinate. The participant is told about the subordinate's performance and is asked to prepare for and actually hold a 45-minute meeting with the subordinate to discuss the performance problems. The role of the subordinate is played by a manager or other member of the assessment center design team or company. The assessment center might also include interest and aptitude tests to evaluate an employee's vocabulary, general mental ability, and reasoning skills. Personality tests may be used to determine if employees can get along with others, their tolerance for ambiguity, and other traits related to success as a manager.

Assessment center exercises are designed to measure employees' administrative and interpersonal skills. Skills typically measured include leadership, oral and written communication, judgment, organizational ability, and stress tolerance. **Table 9.4** shows an example of the skills measured by the assessment center. As shown, each exercise gives participating employees the opportunity to demonstrate several different skills. For example, the scheduling exercise evaluates employees' administrative and problem-solving ability in meeting production demands. The leaderless group discussion exercise measures interpersonal skills such as sensitivity toward others, stress tolerance, and oral communication skills.

Managers are usually used as assessors. The managers are trained to look for employee behaviors that are related to the skills that will be assessed. Typically, each assessor observes and records one or two employees' behaviors in each exercise. The assessors review their notes and rate each employee's level of skills (e.g., 5 = high level of leadership skills, 1 = low level of leadership skills). After all employees have completed the exercises, the assessors discuss their observations of each employee. They compare their ratings and try to agree on each employee's rating for each of the skills.

Research suggests that assessment center ratings are related to performance, salary level, and career advancement.[57] Assessment centers also may be useful for development because employees who participate in the process receive feedback regarding their attitudes, skill strengths, and weaknesses.[58] For example, Steelcase, the office furniture manufacturer based in Grand Rapids, Michigan, uses assessment centers for first-level managers.[59] The assessment center exercises include in-basket, interview simulation, and a timed scheduling exercise requiring participants to fill positions created by absences. Managers are also required to confront an employee on a performance issue, getting the employee to commit to improve. Because the exercises relate closely to what managers are required to do at work, feedback given to managers based on their performance in the assessment center can target specific skills or competencies that they need to be successful managers.

TABLE 9.4 Examples of Skills Measured by Assessment Center Exercises

	Exercises				
	In-Basket	Scheduling Exercise	Leaderless Group Discussion	Personality Test	Role Play
Skills					
Leadership (dominance, coaching, influence, resourcefulness)	X		X	X	X
Problem solving (judgment)	X	X	X		X
Interpersonal (sensitivity, conflict resolution, cooperation, oral communication)			X	X	X
Administrative (organizing, planning, written communications)	X	X	X		
Personal (stress tolerance, confidence)			X	X	X

X indicates a skill measured by the exercise.

Performance Appraisals and 360-Degree Feedback Systems

Performance appraisal is the process of measuring employees' performance. Performance appraisal information can be useful for employee development under certain conditions.[60] The appraisal system must tell employees specifically about their performance problems and how they can improve their performance. This includes providing a clear understanding of the differences between current performance and expected performance, identifying causes of the performance discrepancy, and developing action plans to improve performance. Managers must be trained in frequent performance feedback. Managers also need to monitor employees' progress in carrying out action plans.

Wipro Limited, a provider of technology solutions, has a performance review process that encourages development.[61] The PerformanceNxt process includes reviews four time a year emphasizing conversations focused on development needs. The conversations encourage employees to discuss and plan their career and learning goals with their manager. Input for the conversations is based on feedback provided to employees from not only their managers but also their peers, direct reports, and internal or external customers who may interact with them.

Upward feedback and 360-degree feedback are popular tools for development, particularly for managers. **Upward feedback** refers to appraisal that involves collecting subordinates' evaluations of managers' behaviors or skills. The 360-degree feedback process is a special case of upward feedback. In **360-degree feedback**, employees' behaviors or skills are evaluated not only by subordinates but by peers, customers, their bosses, and themselves. The raters complete a paper or online survey asking them to rate the person on a number of different dimensions. **Table 9.5** provides an example of the types of skills related to management success that are rated in a 360-degree feedback questionnaire. Typically, raters are asked to assess the manager's strength in a particular item or whether development is needed. Raters may also be asked to identify how frequently they observe a competency or skill (e.g., always, sometimes, seldom, never).

TABLE 9.5 Skills Related to Managerial Success

Resourcefulness	Can think strategically, engage in flexible problem solving, and work effectively with higher management
Doing whatever it takes	Has perseverance and focus in the face of obstacles
Being a quick study	Quickly masters new technical and business knowledge
Building and mending relationships	Knows how to build and maintain working relationships with co-workers and external parties
Leading subordinates	Delegates to subordinates effectively, broadens their opportunities, and acts with fairness toward them
Compassion and sensitivity	Shows genuine interest in others and sensitivity to subordinates' needs
Straightforwardness and composure	Is honorable and steadfast
Setting a developmental climate	Provides a challenging climate to encourage subordinates' development
Confronting problem subordinates	Acts decisively and fairly when dealing with problem subordinates
Team orientation	Accomplishes tasks through managing others
Balance between personal life and work	Balances work priorities with personal life so that neither is neglected
Decisiveness	Prefers quick and approximate actions to slow and precise ones in many management situations
Self-awareness	Has an accurate picture of strengths and weaknesses and is willing to improve
Hiring talented staff	Hires talented people for the team
Putting people at ease	Displays warmth and a good sense of humor
Acting with flexibility	Can behave in ways that are often seen as opposites

Source: Adapted from C. D. McCauley, M. M. Lombardo, and C. J. Usher, "Diagnosing Management Development Needs: An Instrument Based on How Managers Develop," *Journal of Management* 15 (1989), pp. 389–403.

The results of a 360-degree feedback system show how the manager is rated on each item. The results also show how self-evaluations differ from evaluations from the other raters. **Table 9.6** shows the type of activities involved in using 360-degree feedback for development.[62] Typically, managers review their results, seek clarification from the raters, and set specific development goals based on the strengths and weaknesses identified.[63]

The benefits of 360-degree feedback include collecting multiple perspectives of managers' performance, allowing employees to compare their own personal evaluations with the views of others, and formalizing communications about behaviors and skill ratings between employees and their internal and external customers. Several studies have shown that performance improves and behavior changes as a result of participating in upward feedback and 360-degree feedback systems.[64] The most change occurs in individuals who receive lower ratings from others than they give themselves (overraters).

TABLE 9.6 Activities in Using 360-Degree Feedback for Development

1. **Understand strengths and weaknesses.** Review ratings for strengths and weaknesses. Identify skills or behaviors where self-ratings and others' (manager, peer, customer) ratings agree and disagree.
2. **Identify a development goal.** Choose a skill or behavior to develop. Set a clear, specific goal with a specified outcome.
3. **Identify a process for recognizing goal accomplishment.** Identify a time frame for achieving the development goal. Identify development goal outcomes that can be measured and tracked.
4. **Identify strategies for reaching the development goal.** Establish strategies such as reading, job experiences, courses, and relationships. Establish strategies for receiving feedback on progress. Establish strategies for reinforcing the new skill or behavior.

Potential limitations of 360-degree feedback include the time demands placed on the raters to complete the evaluations, managers seeking to identify and punish raters who provide negative information, the need to have a facilitator help interpret results, and companies' failure to provide ways that managers can act on the feedback they receive (development planning, meeting with raters, taking courses, etc.).

Effective 360-degree feedback systems include several factors. The system must provide reliable or consistent ratings and competencies, raters' confidentiality must be maintained, the behaviors or skills assessed must be job-related (valid), the system should be easy to use, and managers should receive and act on the feedback.[65]

Regardless of the assessment method used, the information must be shared with the employee for development to occur. Along with assessment information, the employee needs suggestions for correcting skill weaknesses and using skills already learned. These suggestions might be to participate in training courses or develop skills through new job experiences. Based on the assessment information and available development opportunities, employees should develop action plans to guide their self-improvement efforts.

Midcontinent Independent System Operator, Inc. (MISO), a not-for-profit organization that delivers electric power across the United States and Canada, uses 360-degree feedback in its career exploration program.[66] The 360-degree feedback instruments asks program participants, peers, and managers to evaluate their skills and give their opinion on whether they are the best fit for a technical or leadership position. Throughout the program, participants learn more about themselves, the organization's career ladders, and what it takes to be successful in each. The feedback, along with what they learned in the program, is used by participants to develop their personal brand, which includes their choice of career path, rationale for that choice, and next developmental steps.

Job Experiences

Most employee development occurs through **job experiences:**[67] relationships, problems, demands, tasks, or other features that employees face in their jobs. A major assumption of using job experiences for employee development is that development is most likely to occur when employees are given stretch assignments. **Stretch assignments** refer to assignments in which there is a mismatch between the employee's skills and past experiences and the skills required for success on the job. To succeed in their jobs, employees must stretch their skills—that is, they are forced to learn new skills, apply their skills and knowledge in a new way, and master new experiences.[68] New job assignments help take advantage of employees' existing skills, experiences, and contacts, while helping them develop new ones.[69]

Consider how Steelcase and BMO Financial Group use stretch assignments.[70] At Steelcase, employees can volunteer to work on projects outside their own functions. This benefits both the company and its employees. The company can quickly locate employees who have the motivation and skills necessary for project teams.

Employees gain experience and develop new skills in ways that their current jobs simply do not allow. BMO Financial Group provides employees with a virtual job board on which managers post short-term projects. The projects give employees the opportunity to apply their current skills as well as develop new skills, build their personal network, and gain new career experiences. Managers benefit from the program because they can more quickly form teams for new projects and emerging business needs.

Most of what we know about development through job experiences comes from a series of studies conducted by the Center for Creative Leadership.[71] Executives were asked to identify key career events that made a difference in their managerial styles and the lessons they learned from these experiences. The key events included those involving the job assignment (such as fixing a failing operation), those involving interpersonal relationships (getting along with supervisors), and the specific type of transition required (situations in which the executive did not have the necessary background). The job demands and what employees can learn from them are shown in **Table 9.7**.

One concern in the use of demanding job experiences for employee development is whether they are viewed as positive or negative stressors. Job experiences that are seen as positive stressors challenge employees to stimulate learning. Job challenges viewed as negative stressors create high levels of harmful stress for employees exposed to them. Recent research findings suggest that all of the job demands, with the exception of obstacles, are related to learning.[72] Managers report that obstacles and job demands related to creating change are more likely to lead to negative stress than the other job demands. This suggests that companies should carefully weigh the potential negative consequences before placing employees in development assignments involving obstacles or creating change.

Although the research on development through job experiences has focused on executives and managers, line employees can also learn from job experiences. As we noted earlier, for a work team to be successful, its members now need the kinds of skills that only managers were once thought to need (such as dealing directly with customers, analyzing data to determine product quality, and resolving conflict among team members). Besides the development that occurs when a team is formed, employees can further develop their skills by switching work roles within the team.

Figure 9.4 shows the various ways that job experiences can be used for employee development. These include enlarging the current job, job rotation, transfers, promotions, downward moves, and temporary assignments. For companies with global operations (multinationals), it is not uncommon for employee development to involve international assignments that require frequent travel or relocation.

Enlarging the Current Job

Job enlargement refers to adding challenges or new responsibilities to employees' current jobs. This could include special project assignments, switching roles within a work team, or researching new ways to serve clients and customers. For example, an engineering employee may join a task force developing new career paths for technical employees. Through this project work, the engineer may lead certain aspects of career path development (such as reviewing the company's career development process). As a result, the engineer not only learns about the company's career development system, but also uses leadership and organizational skills to help the task force reach its goals.

Job Rotation and Lateral Moves

Moving up the career ladder is not always possible for a number of reasons, including the lack of opportunities due to flatter company structures and employees not retiring or staying longer in their positions. As a result, companies are using lateral moves and job rotation for employee development. **Job rotation** and lateral moves give employees a series of job assignments in various functional areas of the company or movement among jobs in a single functional area or department. Job rotation involves a planned sequence of jobs that

TABLE 9.7 Job Demands and the Lessons Employees Learn from Them

Making transitions	*Unfamiliar responsibilities:* The manager must handle responsibilities that are new, very different, or much broader than previous ones. *Proving yourself:* The manager has added pressure to show others that she can handle the job.
Creating change	*Developing new directions:* The manager is responsible for starting something new in the organization, making strategic changes in the business, carrying out a reorganization, or responding to rapid changes in the business environment. *Inherited problems:* The manager has to fix problems created by a former incumbent or take over handling problem employees. *Reduction decisions:* Decisions about shutting down operations or staff reductions have to be made. *Problems with employees:* The manager must deal with employees who lack adequate experience, are incompetent, or are resistant.
Having a high level of responsibility	*High stakes:* Clear deadlines, pressure from senior managers, high visibility, and responsibility for key decisions make success or failure in this job clearly evident. *Managing business diversity:* The scope of the job is large, with responsibilities for multiple functions, groups, products, customers, or markets. *Job overload:* The sheer size of the job requires a large investment of time and energy. *Handling external pressure:* External factors that affect the business (e.g., negotiating with unions or government agencies, working in a foreign culture, coping with serious community problems) must be dealt with.
Being involved in nonauthority relationships	*Influencing without authority:* Getting the job done requires influencing peers, higher management, external parties, or other key people over whom the manager has no direct authority.
Facing obstacles	*Adverse business conditions:* The business unit or product line faces financial problems or difficult economic conditions. *Lack of top management support:* Senior management is reluctant to provide direction, support, or resources for current work or new projects. *Lack of personal support:* The manager is excluded from key networks and gets little support and encouragement from others. *Difficult boss:* The manager's opinions or management style differs from those of the boss, or the boss has major shortcomings.

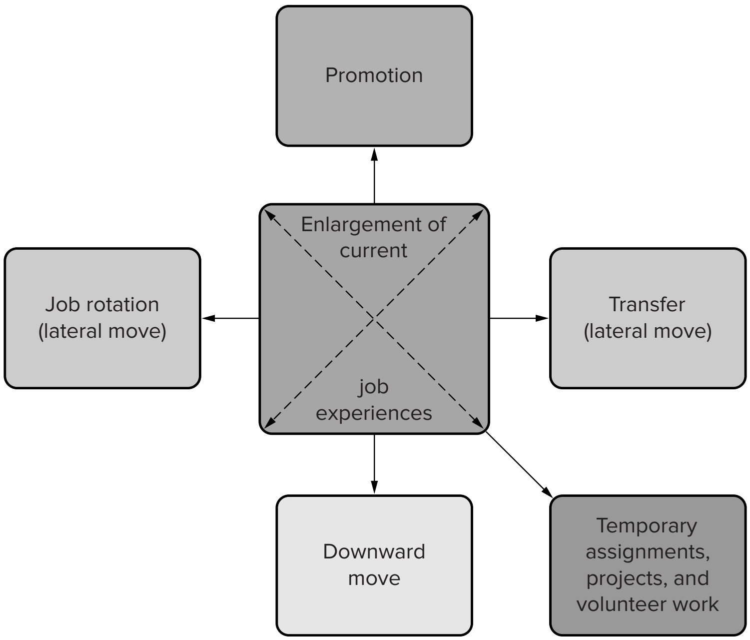
Source: C. D. McCauley, L. J. Eastman, and J. Ohlott, "Linking Management Selection and Development through Stretch Assignments," *Human Resource Management* 84 (1995), pp. 93–115. Copyright 1995 Wiley Periodicals, Inc., a Wiley Company.

the employee is expected to hold, while lateral moves may not necessarily involve a predetermined sequence of jobs or positions. Bell and Howell encourages employees to seek positions outside their current functional area. This helps employees develop their skills and personal network and facilitates knowledge sharing throughout the company. Also, job rotation provides the opportunity for another employee to move into the position, creating a system that helps continuously develop skills.[73] The job rotation program at India-based Tata Consultancy Services sends native employees to operations in China, Hungary, and South America.[74] The program helps the company have skilled employees who are prepared to work in any of the company's offices in 42 countries. Employees also gain an understanding of the culture of the country they work in. It also helps improve customer service because the company can draw on the strength of its entire workforce, rather than just relying on employees who are located close to the customer. The assignments typically last 18 to 24 months, involving learning from both the customers and the local employees based at the location. After the assignment is completed, the employee usually works on the same kinds of projects he worked on in the overseas assignment, which helps transfer the knowledge gained to the home operation.

Job rotation helps employees gain an overall appreciation of the company's goals, increases their understanding of different company functions, and develops a network of contacts.[75] Encouraging employees to move laterally helps companies retain talented employees who want new job experiences and opportunities. It also helps identify employees' strengths and weaknesses, especially related to determining if they might be candidates for leadership positions in the future. Employees get the opportunity to work on new projects and problems, develop new skills, and apply their current skills in a new way. Also, employees learn about different aspects of the business that are important for future promotion opportunities. A lateral move can involve physically relocating to a new office in the same building or moving across the country or internationally. Because lateral moves can create confusion and stress, it is important for companies to reimburse the employees for moving and relocation expenses, provide orientation to the new job and location, and encourage managers and peers to provide coaching and emotional support. It is important to keep in mind that many employees, especially millennials, may feel that lateral moves are harmful to their career because they don't involve a promotion or don't provide opportunities to learn new skills or have different work experiences. As a result of these perceptions, talented employees may leave and seek challenging work elsewhere. In fact, lateral moves likely enhance and accelerate career advancement because they improve employees' current skills, add new ones, and expose them to different aspects of the business.

To ensure that its employees understood the benefits of lateral moves, Cisco Systems encouraged career advice and coaching sessions between company leaders and lower-level managers from a different business function.[76] The purpose of these sessions was to discuss with the managers how moving to a different function could benefit them. The leaders emphasized how gaining cross-functional skills could help the managers

FIGURE 9.4 **How Job Experiences Are Used for Employee Development**



grow their career. At Haskell, job rotation opportunities are provided at its Packaging Center of Excellence in Atlanta for design engineers to work with a design team.[77] It also provides the opportunity to rotate into the Systems Analytics group, where responsibilities include process improvement and simulation testing for manufacturing systems. This has helped engineers understand the importance of data-driven decisions based on complex testing. The rotation has resulted in fewer manufacturing errors, improved designs, and the reduction of time and costs for project installations. The job rotations also have helped identify engineers who are ready for promotion. Two-thirds of the promotions at the Atlanta location have occurred because of job rotation.

Despite its advantages, there are several potential problems with job rotation for both the employee and the work unit. The rotation may create a short-term perspective on problems and solutions in rotating employees and their peers. Employees' satisfaction and motivation may be adversely affected because they find it difficult to develop functional specialties and they don't spend enough time in one position to receive a challenging assignment. Productivity losses and workload increases may be experienced by both the department gaining a rotating employee and the department losing the employee due to training demands and loss of a resource. Consider how Atrium Health, a nonprofit health-care network, deals with a potential problem of job rotation.[78] Atrium Health uses a rotation program to help employees develop new skills. Employees can do a one-month rotation at a smaller, high-performing hospital. The rotation program helps employees understand a different culture that achieves consistent success. But their managers can be unsupportive of rotation opportunities because they have to rebalance the workload and they are losing a high-performing employees for a lengthy time period. Atrium Health addresses this issue by "backfilling" positions with high-potential employees to provide them with a development and skill-building experience when an employee is doing a rotation.

Table 9.8 shows characteristics of effective job rotation systems. Effective job rotation systems are linked to the company's training, development, and career management systems. Also, job rotation is used for all types of employees, not just those with managerial potential.

TABLE 9.8 Characteristics of Effective Job Rotation Systems

1. Job rotation is used to develop skills, as well as give employees experience they will need for managerial positions.
2. Employees understand specific skills that will be developed by rotation.
3. Job rotation is used for all levels and types of employees.
4. Job rotation is linked with the career management process so that employees know the development needs addressed by each job assignment.
5. Benefits of rotation are maximized and costs are minimized through timing the rotations to reduce workload costs and help employees understand the job rotation's role in their development plans.
6. All employees have equal opportunities for job rotation assignments, regardless of their demographic group.

Sources: Based on B. Kaye, L. Williams, and L. Cowart, "Over, Not Out," *TD* (September 2017), pp. 70–72; L. Cheraskin and M. Campion, "Study Clarifies Job Rotation Benefits," *Personnel Journal* (November 1996), pp. 31–38; and M. Fiester, A. Collis, and N. Cossack, "Job Rotation, Total Rewards, Measuring Value," *HR Magazine* (August 2008), pp. 33–34.

Transfers, Promotions, and Downward Moves

Upward, lateral, and downward mobility is available for development purposes in most companies.[79] In a **transfer**, an employee is assigned a job in a different area of the company. Transfers do not necessarily increase job responsibilities or compensation. They are likely lateral moves (a move to a job with similar responsibilities). **Promotions** are advancements into positions with greater challenges, more responsibility, and more authority than in the previous job. Promotions usually include pay increases. Luz Damaris Rosario now overseas one of Goya Foods largest food production plants.[80] Two years after joining the company, she was promoted to a laboratory management position overseeing a team of scientists in a Puerto Rico plant that produced canned beans and tomato sauce. The promotion gave her greater access to senior company executives and helped her gain a better understanding of how Goya Foods operated.

Transfers may involve relocation within the United States or to another country. This can be stressful not only because the employee's work role changes, but if the employee is in a two-career family, the spouse must find new employment. Also, the family has to join a new community. Transfers disrupt employees' daily lives, interpersonal relationships, and work habits.[81] People have to find new housing, shopping, health care, and leisure facilities, and they may be many miles from the emotional support of friends and family. They also have to learn a new set of work norms and procedures; they must develop interpersonal relationships with their new managers and peers; and they are expected to be as productive in their new jobs as they were in their old jobs, even though they may know little about the products, services, processes, or employees for whom they are responsible.

Because transfers can provoke anxiety, many companies have difficulty getting employees to accept them. Research has identified the employee characteristics associated with a willingness to accept transfers:[82] high level of career ambition, a belief that one's future with the company is promising, and a belief that accepting a transfer is necessary for success in the company. Employees who are not married and not active in the community are generally the most willing to accept transfers. Among married employees, the spouse's willingness to move is the most important influence on whether an employee will accept a transfer.

A **downward move** occurs when an employee is given less responsibility and authority.[83] This may involve a move to another position at the same level (lateral demotion), a temporary cross-functional move, or a demotion because of poor performance. Temporary cross-functional moves to lower-level positions, which give employees experience working in different functional areas, are most frequently used for employee development. For example, engineers who want to move into management often take lower-level positions (like shift supervisor) to develop their management skills.

Because of the psychological and tangible rewards of promotions (such as increased feelings of self-worth, salary, and status in the company), employees are more willing to accept promotions than lateral or downward moves. Promotions are more readily available when a company is profitable and growing. When a company is restructuring or experiencing stable or declining profits—especially if numerous employees are interested in promotions and the company tends to rely on the external labor market to staff higher-level positions—promotion opportunities may be limited.[84]

Unfortunately, many employees have difficulty associating transfers and downward moves with development. They see them as punishment rather than as opportunities to develop skills that will help them achieve long-term success with the company. Many employees decide to leave a company rather than accept a transfer. Companies need to successfully manage transfers not only because of the costs of replacing employees but because of the relocation costs such as home sales and purchases directly associated with them. One challenge that companies face is learning how to use transfers and downward moves as development opportunities—convincing employees that accepting these opportunities will result in long-term benefits for them.

To ensure that employees accept transfers, promotions, and downward moves as development opportunities, companies can provide:

- Information about the content, challenges, and potential benefits of the new job and location.
- Involvement in the transfer decision by sending the employees to preview the new location and giving them information about the community.

- Clear performance objectives and early feedback about their job performance.
- A host at the new location to help them adjust to the new community and workplace.
- Information about how the job opportunity will affect their income, taxes, mortgage payments, and other expenses.
- Reimbursement and assistance in selling and purchasing or renting a place to live.
- An orientation program for the new location and job.
- Information on how the new job experiences will support employees' career plans.
- Assistance for dependent family members, including identifying schools and child care and elder care options.
- Help for the spouse in identifying and marketing skills and finding employment.[85]

Temporary Assignments, Projects, Volunteer Work, and Sabbaticals

Temporary assignments refer to employees taking on a position or project to help them increase their skills, gain a new perspective, or determine if they are interested in working in a new role. All temporary assignments have a predetermined ending date after which the employee returns to their permanent position. For example, Mondelēz International, a snack company with 100,000 employees, wanted to help its managers learn about how to market its products using mobile devices. For several days, it sent its managers to nine small mobile-technology companies to help them gain an understanding of their entrepreneurial spirit and how quickly these companies generated ideas and built and tested prototypes of new marketing efforts.[86] An associate brand manager from PepsiCo's New York headquarters spent a week at Airbnb, a San Francisco–based travel rental business. Managers from the two companies hoped to learn from each other's brand management practices. Both companies have casual, collaborative work environments, but compared to PepsiCo, brand management at Airbnb is based more on instinct than on data analysis and the ideas of marketing agencies. Marketing managers at Airbnb were interested in learning about how PepsiCo built data sets of market research. To develop a broad understanding of the business, directors at Genentech Inc. spend 10 percent of their time over six to nine months in a different function working on special projects, participating in task forces, and shadowing business leaders.[87]

Employee exchange is another type of temporary assignment. Procter & Gamble (P&G) and Google have started to swap employees.[88] Employees from the two companies participate in each other's training programs and attend meetings where business plans are discussed. Both companies hope to benefit from the employee swap. P&G is trying to increase its understanding of how to market laundry detergent, toilet paper, and skin cream products to a new generation of consumers, who spend more time online than watching television. Google wants to gain more ad revenue by persuading companies to shift from showcasing their brands on television to video-sharing sites such as YouTube. The idea of the employee swap occurred when P&G recognized that a switch to a smaller Tide laundry soap bottle with a more concentrated formula did not include an online campaign, where buyers could find answers as to why the bottle decreased in size. Employees of both companies have benefited from the swap. Google employees have learned that Tide's bright orange packaging is a critical part of the brand and have adopted P&G's marketing language, and P&G employees have recognized that online ad campaigns can increase brand awareness, even for products such as diapers that are not purchased online. P&G has invited mommy-bloggers to visit its baby division to better understand how its diapers can meet their needs.

Temporary assignments can include a **sabbatical** or a volunteer assignment. Both sabbaticals and volunteer assignments can help improve employee well-being through reducing stress and burnout and providing new energy. They also help employees acquire new skills and broaden their perspectives.[89]

A sabbatical is a leave of absence from the company to renew or develop new skills. Employees on sabbatical often receive full pay and benefits. Sabbaticals improve employee well-being through reducing stress and burnout and helping them acquire new skills and perspectives. Sabbaticals also allow employees more time for personal pursuits such as writing a book or spending more time with young children. Sabbaticals are common in a variety of industries, ranging from consulting firms to the fast-food industry.[90] For example, BrewDog, a craft beer maker, offers its employees a four-week paid sabbatical every five years. Patagonia, the outdoor clothing company, offers its employees two months of paid sabbatical leave. Employees can only qualify for sabbatical by choosing an environmental initiative or group and working for them during the sabbatical. PwC requires a sabbatical for all newly promoted senior managers to recharge. The firm offers four weeks off, paying for three weeks, to give employees a chance to pursue a lifelong goal, volunteer, or do nothing at all.

Volunteer assignments allow employees to develop their skills by serving the local or global community, membership on public or private non-profit boards, taking on leadership roles in professional associations or clubs, and agreeing to speak at or organize conferences or forums. Volunteer assignments may give employees opportunities to manage change, teach, have a high level of responsibility, and be exposed to other job demands shown earlier in **Table 9.7**. For example, the former chairman and CEO of Allergan served on company boards outside of the pharmaceutical industry throughout his career. This helped him meet commercial partners, better identify trends, and gain a new perspective on potential product markets.[91] Employees at Hershey, the chocolate and cocoa products company, volunteer their expertise in areas such as marketing, manufacturing, and product development to small communities in West Africa that produce cocoa for Hershey.[92] The volunteering opportunities provide employees with exposure to emerging markets, the ability to practice leading virtual teams, and the challenge of innovating when resources are scarce. Also, these opportunities help develop the coaching and mentoring capabilities needed by the company's future leaders.

Many companies encourage their employees to donate their expertise without losing pay or vacation time.[93] KKR, a global investment company, gives employees 40 hours of paid time each year to work at non-profits of their choice. Over 1,000 employees have spent nearly 11,000 hours working at 220 organizations.

How to Match Job Experiences to Employees' Development Needs and Goals

Job experiences are used for development in companies of all sizes, but their type and availability vary.[94] Some companies, such as HCA, Inc., with 195,000 employees in the health-care business, have the ability to provide high-potential employees with many different kinds of developmental experiences. For example, an administrator can begin working in a position in a smaller health-care facility and then move to a larger facility, including a hospital or health-care business. Other companies might not have the same type or number of development experiences at work, but can encourage employees to get relevant experiences outside of work. For example, managers are joining boards of nonprofit organizations to help others and the community gain skills and to advance their careers.[95] Nonprofit board experience helps managers develop their leadership skills and broaden their network. They may get opportunities for experiences that they wouldn't normally get in their job, such as running a fund-raising campaign or participating in strategic planning. These experiences help strengthen their current skills or develop new skill sets. For example, one manager joined the YMCA board. His experience helping recruit a new YMCA executive helped him conduct better job interviews with potential candidates seeking jobs at his company. He now challenges candidates to see how they handle stressful situations and spends more time discussing with other managers if a candidate would fit well with the company culture. Nonprofits benefit because they need skilled managers who can help them operate more efficiently and effectively. Regardless of the size of the company, to be effective development activities, job experiences should be tailored to employees' development needs and goals.[96] **Table 9.9** shows which job experiences are most appropriate for different types of employee development needs or goals.

TABLE 9.9 Matching Job Experiences to Employees' Development Needs

Job Experience	Employee Development Need or Goal
Job enlargement	Is interested in developing new skills; would like to continue in current position; and position has opportunities for skill development
Job rotation or transfer	Desires a job with similar responsibilities to current position but with assignments requiring new skills; interested in learning about another function, division, or product of the organization
Promotion	Ready to assume more responsibility and accountability for other employees and projects; and desires to influence business decisions
Downward move	Is considering changing or trying out a new profession or career and needs to acquire new skill; wants to reduce job stress or achieve better work and nonwork balance; or prefers a previous job
Temporary assignments, project work, volunteer work, sabbatical	Wants a new understanding or perspective of customers, products, or community issues or to obtain job experiences and develop skills in jobs not available in the company; wants to use and develop current skills in a new context; or wants to avoid burnout and alleviate stress

Source: Based on B. Kaye, "Up Is Not the Only Way . . . Really!" *T+D* (September 2011), pp. 41–45.

Interpersonal Relationships

Employees can also develop skills and increase their knowledge about the company and its customers by interacting with a more experienced organization member. Mentoring and coaching are two types of interpersonal relationships that are used to develop employees.

Mentoring

A **mentor** is an experienced, productive senior employee who helps develop a less experienced employee (the protégé). Because of the lack of potential mentors and the recognition that employees can benefit from relationships with peers and colleagues, some companies have initiated and supported other forms of mentoring, including group and peer mentoring. In **group or peer mentoring programs**, a successful senior employee is paired with a group of four to six less experienced protégés. One potential advantage of peer mentoring is that protégés are encouraged to learn from each other, as well as from a more experienced senior employee. Also, group mentoring acknowledges the reality that it is difficult for one mentor to provide an employee with all the guidance and support he or she needs. Group mentoring provides a development network for employees: a small group that an employee can use for mentoring support and also rely on to take an interest in his or her learning and development. The leader helps protégés understand the organization, guides them in analyzing their experiences, and helps them clarify career directions. Each member of the group may complete specific assignments, or the group may work together on a problem or issue.[97]

For example, at IBM mentoring takes the form of a strategy that employees can use to exchange knowledge.[98] This isn't meant to discourage traditional one-on-one mentoring relationships but instead encourages employees to build and use IBM's social network tool to identify peers, managers, and even potential mentors. They can use this tool to search for and share knowledge. It provides communities of practice and tagging capabilities that allow employees to search for others who have the expertise they need. W. L. Gore & Associates, the company that makes dental floss, Gore-Tex waterproof fabric, and synthetic grafts used in heart procedures, relies on sponsors.[99] Sponsors serve as coaches, advocates, and mentors, with the goal of helping the sponsored employee learn new skills. Newly hired employees are assigned a sponsor but as they gain more experience or change jobs they are encouraged to find their own sponsor based on their development and career goals. Additionally, all employees are expected to advocate and help each other grow. Every employee is encouraged, but not required, to become a sponsor and they can change sponsors at any time. However, because sponsorship is such a part of Gore's culture and learning and development strategy, most employees serve as sponsors. The learning and development group provides training on the skills needed to be an effective sponsor, such as how to give feedback and how to read nonverbal cues. It also developed a course that explains the value of sponsorship in the company culture and how it relates to the company's agility and innovation business goals. In addition to using training to ensure sponsorships are effective, tools are provided, such as an alignment form that the sponsor and the sponsored employee complete to ensure they agree on how to work together.

Most mentoring relationships develop informally as a result of interests or values shared by the mentor and the protégé. Research suggests that employees with certain personality characteristics (like emotional stability, the ability to adapt their behavior based on the situation, and high needs for power and achievement) are most likely to seek a mentor and be an attractive protégé for a mentor.[100] Mentoring relationships can also develop as part of a formal mentoring program (i.e., a planned company effort to bring together successful senior employees with less experienced employees). **Table 9.10** shows examples of how companies are using formal mentoring programs. Mentoring programs have many important purposes, including socializing new employees, developing managers, and providing opportunities for women and minorities to share experiences and gain the exposure and skills needed to move into management positions.

TABLE 9.10 Examples of Mentoring Programs

Cochlear—During the first day of the company's onboarding program, new hires are paired with a mentor. Both their manager and mentor are encouraged to check in with them weekly.
Vistage Worldwide—Teams of 15 to 20 employees provide opportunities for advice on personal or professional challenges. A trained peer group facilitator guides the discussion and helps the team listen, paraphrase, and ask probing questions in order to provide new perspectives on the issue and potential solutions.
Gilbane—One-to-one mentoring program pairs leaders with executives outside of their business and geographic area for six months to increase their readiness to take a new position and strengthen their leadership potential. Matching is made on the basis of talent surveys and personality assessments. Mentors and protégés meet once each month to share career advice and company knowledge.
United Shore's Underwriter Mentoring Program—It begins immediately after underwriter training, and in just three weeks, participants (mentees) must demonstrate proficiency with 35 on-the-job skill competencies while also underwriting six loans a week to graduate.
Cisco Systems—To reduce the time it takes new board of director members to be effective, they are paired with a more experienced board director who serves as a mentor. The mentor helps them understand board of director meeting norms, provides the content for members' beliefs, explains terms used in briefing materials, and gives advice on the right place to sit in the board meeting room.
McDonald's—Offers a virtual online mentoring program that employees can use to build their skill sets and develop relationships.
Danone's DanVisor—Six month program that matches high-potential employees with mentors from the business area they want to explore as well as skills they would like to develop. The program involves networking across the company, sharing experiences, and participating in knowledge transfer.

Sources: Based on M. Weinstein, "Training Ensures United Shore's Success," *training* (March/April 2020): 38–40; "ASTD 2019 Best Award Winners: Cochlear," *TD* (October 2019): 85; S. Castellano, "Driven From Within," *TD* (October 2019): 74–77; J. Lublin, "New in Boardrooms: Buddy System," *The Wall Street Journal* (September 20, 2017), p. B7; "Training Top 125, Gilbane," *training* (January/February 2016), p. 69; M. Weinstein, "Mentoring in the Digital Age," *training* (September/October 2016), pp. 28–31; R. Emelo, "Shift Your Focus With Modern Mentoring," *TD* (September 2015), pp. 36–41.

Developing Successful Mentoring Programs

One major advantage of formalized mentoring programs is that they ensure access to mentors for all employees, regardless of gender, race, or nationality. An additional advantage is that participants in the mentoring relationship know what is expected of them.[101] One limitation of formal mentoring programs is that mentors may not be able to provide counseling and coaching in a relationship that has been artificially created.[102] To overcome this limitation, it is important that mentors and protégés spend time discussing their work styles, personalities, and backgrounds, which helps build the trust needed for both parties to be comfortable with their relationship.[103]

Table 9.11 presents the characteristics of a successful formal mentoring program. Mentors should be chosen based on interpersonal and technical skills. They also need to be trained.[104] For mentors, protégés, and the company to get the most out of mentoring, tools and support are needed.[105]

TABLE 9.11 Characteristics of Successful Formal Mentoring Programs

1. Mentor and protégé participation is voluntary. The relationship can be ended at any time without fear of punishment.
2. The mentor–protégé matching process does not limit the ability of informal relationships to develop. For example, a mentor pool can be established to allow protégés to choose from a variety of qualified mentors.
3. Mentors are chosen on the basis of their past record in developing employees, their willingness to serve as mentors, and evidence of positive coaching, communication, and listening skills.
4. Mentor–protégé matching is based on how the mentor's skills can help meet the protégé's needs.
5. The purpose of the program is clearly understood. Projects and activities that the mentor and protégé are expected to complete are specified.
6. The length of the program is specified. The mentor and protégé are encouraged to pursue the relationship beyond the formal period.
7. A minimum level of contact between the mentor and protégé is specified. Mentors and protégés need to determine the mechanics of the relationship: when they will meet, how often, and how they will communicate outside of the meetings.
8. Protégés are encouraged to contact one another to discuss problems and share successes.
9. The mentor program is evaluated. Interviews with mentors and protégés give immediate feedback regarding specific areas of dissatisfaction. Surveys gather more detailed information regarding benefits received from participating in the program.
10. Employee development is rewarded, which signals to managers that mentoring and other development activities are worth their time and effort.

A key to successful mentoring programs is that the mentor and protégé are well matched and can interact with each other face to face or virtually using video-conferencing. At PayPal, mentors and protégés are not assigned.[106] Instead, employees can sign up for small group sessions in which six employees interact with a potential mentor. After a few meetings, if employees feel a connection they can express interest in becoming the mentor's protégé.

A mentoring program at Conductix-Wampfler has many characteristics of a successful mentoring program.[107] Conductix-Wampfler, makes systems for transmitting energy and data to mobile machinery and equipment. At its three manufacturing facilities, the employee turnover rate is 7 percent, below the industry average. One of the reasons is likely its mentorship program, which involves all employees regardless of their position. At Conductix-Wampfler, every new hire is assigned to a mentor. Existing employees can request a mentor when they have moved to a new position, taken on additional responsibilities, or simply want to explore additional career growth. Mentors are chosen based on identifying the employee who can best help the protégé achieve his or her goals. The mentor may come from the same department or another department. Or a mentor may be identified from another group to help a protégé gain an understanding of their situation from a new or different perspective. Conductix does not just assign mentors—it helps mentors develop the skills they need to be successful in the role. The company provides one-on-one coaching in how to start a mentoring relationship. They participate in online training about how to set goals, give feedback, and handle confidential information. Protégés, too, receive training in how to get the most out of the program by participating effectively in meetings and setting goals. The mentor is responsible for initiating the relationship with the protégé. However, once the relationship is started, the company expects protégés to take responsibility for communicating their needs to the mentor and requesting meetings as often as they feel it is necessary.

To attract mentors and reinforce the importance of the program, Conductix rewards mentors for participating in its mentorship program. Mentors who fulfill the requirements of the role earn a $500 bonus after 90 days and are eligible for additional bonuses at their twice-yearly performance reviews. They also may receive recognition in spotlight stories in the company newsletter. Mentors, protégés, and the company all benefit from the mentoring program. Serving as a mentors gives employees leadership experience, increases their coaching and feedback skills, and gives them opportunities to interact with management and coworkers in other functions. This can lead to a promotion. Protégés benefit by getting a better understanding of their job and the company as a whole. Also, it helps them increase their skills and identify opportunities for new positions. Conductix benefits from loyal employees, a safer work environment, and a pool of talent to fill open positions from within.

Benefits of Mentoring Relationships

Both mentors and protégés can benefit from a mentoring relationship. Research suggests that mentors provide career and psychosocial support to their protégés. **Career support** includes coaching, protection, sponsorship, and providing challenging assignments, exposure, and visibility. **Psychosocial support** includes serving as a friend and a role model, providing positive regard and acceptance, and creating an outlet for the protégé to talk about anxieties and fears. Additional benefits for the protégé include gaining knowledge and skills, higher rates of promotion, higher salaries, and greater organizational influence.[108]

Mentoring relationships provide opportunities for mentors to develop their interpersonal skills and increase their feelings of self-esteem and worth to the organization. For individuals in technical fields such as engineering or health services, the protégé may help them gain knowledge about important new scientific developments in their field (and therefore prevent them from becoming technically obsolete). José Yanes served as a mentor for several employees at Ford Motor Company.[109] He found that serving as a mentor contributed to his own personal development by helping him improve his own communication skills and work harder at building trust with other people.

Protégés can help mentors in several ways.[110] Mentors can learn digital skills such as how to use social media, gain a more complete perspective on what diversity means, and better understand the needs and motivations of younger employees. Serving as mentor may help meet younger employees' needs for feeling valued, and networking with more senior employees may help employees gain the exposure and visibility needed to learn and further their career. This is especially the case in reverse mentoring programs. **Reverse mentoring** refers to mentoring in which younger employees mentor more senior employees. The reverse mentoring program at BNY Mellon's Pershing has had a number of benefits including developing more senior employees' digital prowess such as skills in using social media at work and gaining an understanding of how the company culture is seen by younger employees.

Mentoring programs can also help encourage women and minorities, who tend to be underrepresented in leadership positions, to develop management skills and move into management positions.[111] Accenture has set goals to increase the percentage of female employees in managing director positions by 2025. To help reach this goal the company developed a four-year sponsorship program. Each year 30 women participate in the program. Each woman gets two sponsors on the company's leadership team who serve as mentors and advocates when managing director positions become available. Eighty percent of the sponsored women have received more responsibilities in their current positions or have moved to higher-level leadership positions.

Coaching

A **coach** is a peer or manager who works with employees to motivate them, help them develop skills, and provides reinforcement and feedback. There are three roles that a coach can play.[112] The main reasons that coaches are used include developing high-potential managers, acting as a sounding board for managers, or specifically trying to change behaviors that are making managers ineffective.[113] Part of coaching may be one-on-one with an employee (such as giving feedback). Another role is to help employees learn for themselves. This involves helping them find experts who can assist them with their concerns and teaching them how to obtain feedback from others. Third, coaching may involve providing resources such as mentors, courses, or job experiences that employees may not be able to gain access to without the coach's help. Research shows that coaching improves employees' skills and performance, especially when an internal coach is used (e.g., a manager who has been trained in coaching).[114]

Consider how PepsiCo and Kaiser Permanente use coaching.[115] As part of leadership development at PepsiCo, experienced and certified coaches debrief assessment results and help employees create development plans. PepsiCo also has a coaching skills course for managers. At Kaiser Permanente (KP), a company that provides health-care services, coaching skills are a must for managers. Managers become accredited coaches by taking coaching skills courses and completing a practical assessment. The practical assessment includes being observed coaching an employee and completing two coaching demonstrations. Once accredited, managers' coaching skills are evaluated by asking employees who were coached by the manager to complete a survey. To help reinforce and continue to develop managers' coaching skills, KP uses a chatbot. The chatbot provides access to coaching resources and reminds managers of the coaching principles they learned in the coaching courses.

The best coaches are empathetic, supportive, practical, and self-confident but don't pretend to know all the answers or want to tell others what to do.[116] Employees who are going to be coached need to be open-minded and interested and not defensive, closed-minded, or concerned with their reputation. Both the coach and the employee to be coached take risks in the relationship. Coaches use their expertise and experiences to help an employee. Employees are vulnerable by honestly communicating about their weaknesses.

To develop coaching skills, training programs need to focus on four issues related to managers' reluctance to provide coaching.[117] First, managers may be reluctant to discuss performance issues even with a competent employee because they want to avoid confrontation. This is especially an issue when the manager is less of an expert than the employee. Second, managers may be better able to identify performance problems than to help employees solve them. Third, managers may feel that the employee interprets coaching as criticism. Fourth, managers may feel that there is not enough time for coaching. To overcome managers' reluctance to provide coaching and reduce the cost of hiring professionally trained and certified coaches (which can range from $500 to $3,500 per hour), companies such as Infosys are beginning to use artificial intelligence-based coaching apps.[118] These apps lower the costs of coaching and give employees with busy schedules the opportunity to receive coaching when they need it.

Special Topics in Employee Development: Succession Planning, Developing Dysfunctional Managers, and Onboarding

Succession Planning

Succession planning refers to the process of identifying, evaluating, developing, and tracking high-potential employees who are capable of moving into different positions in the company that result from planned or unplanned job openings due to turnover, promotion, or business growth. Succession planning is often discussed when considering a company's managers or top leaders but it is an important consideration for any job. Succession planning helps organizations in several different ways. It identifies and prepares future company leaders, helps ensure that the company runs smoothly when key employees and managers leave, and creates opportunities for development and promotion. It provides a set of development experiences that managers must complete to be considered for top management positions, which avoids the premature promotion of managers who are not ready to move into leadership positions. Succession planning also helps attract and retain managerial employees by providing them with development opportunities that they can complete if upper management is a career goal for them. For example, at Medidata Solutions, a software services company, talent reviews are conducted two times each year.[119] The talent reviews involve succession planning and creating individual plans for all employees tailored to their strengths, interests, and business needs.

Succession planning often focuses on high-potential employees. **High-potential employees** are those people that the company believes are capable of being successful in higher-level managerial positions, such as general manager of a strategic business unit, functional director (e.g., director of marketing), or CEO.[120] High-potential employees typically complete an individual development program that involves education, executive mentoring and coaching, and rotation through job assignments. Job assignments are based on the successful career paths of the managers whom the high-potential employees are being prepared to replace. High-potential employees may also receive special assignments, such as making presentations and serving on committees and task forces.

Despite the importance of succession planning, many companies do not do it well. A survey of company directors showed that fewer than half believed they were spending enough time on succession planning and 18 percent did not agree that their company had adequate bench strength in its talent pipeline.[121] **Bench strength** refers to having a pool of talented employees who are ready when needed. The dissatisfaction with succession planning may result from the tendency to focus only on managers at the vice president level or above, failing to identify successors because they don't want to risk potential leaders leaving the company because they are discouraged and disappointed, and a short-term focus on succession planning only when vacancies occur rather than a long-term process designed to develop "bench strength."

Process of Developing a Succession Plan

Table 9.12 shows the process used to develop a succession plan.[122] The first step is to identify what positions are included in the succession plan, such as all management positions or only certain levels of management. The second step is to identify which employees are part of the succession planning system. For example, in some companies, only high-potential employees are included in the succession plan. Third, the company needs to identify how positions will be evaluated. For example, will the emphasis be on competencies needed for each position or on the experiences an individual needs to have before moving into the position? Fourth, the company should identify how employee potential will be measured. That is, will employees' performance in their current jobs as well as ratings of potential be used? Will employees' position interests and career goals be considered? Fifth, the succession planning review process needs to be developed. Typically, succession planning reviews first involve employees' managers and human resources. A talent review could also include an overall assessment of leadership talent in the company, an identification of high-potential employees based on their performance and potential, and a discussion of plans to keep key managers from leaving the company. Sixth, succession planning depends on other HR systems, including compensation, training and development, and staffing. Incentives and bonuses may be linked to completion of development opportunities. Activities such as training courses, job experiences, mentors, and 360-degree feedback can be used to meet development needs. Companies need to make decisions (such as will they fill an open management position internally with a less experienced employee who will improve in the role over time, or will they hire a manager from outside the company who can immediately deliver results?). Seventh, employees need to be provided with feedback on future moves, expected career paths, and development goals and experiences. Finally, the succession planning process needs to be evaluated. This includes identifying and measuring appropriate results outcomes (such as reduced time to fill manager positions and increased use of internal promotions) as well as collecting measures of satisfaction with the process (reaction outcomes) from employees and managers. Also, modifications that will be made to the succession planning process need to be identified, discussed, and implemented.

TABLE 9.12 The Process of Developing a Succession Plan

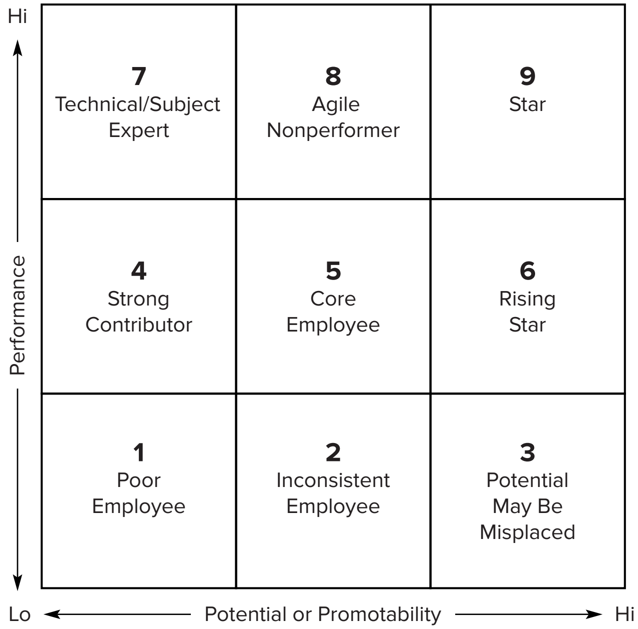
1. Identify what positions are included in the plan.
2. Identify the employees who are included in the plan.
3. Develop standards to evaluate positions (e.g., competencies, desired experiences, desired knowledge, developmental value).
4. Determine how employee potential will be measured (e.g., current performance and potential performance).
5. Develop the succession planning review process.
6. Link the succession planning system with other human resource systems, including training and development, compensation, performance management, and staffing systems.
7. Determine what feedback will be provided to employees.
8. Measure the effectiveness of the succession planning process.

Sources: Based on A. Cremo and T. Bux, "Creating a Vibrant Organizational Leadership Pipeline," *TD* (July 2016), pp. 76–77; W. Rothwell, "The Future of Succession Planning," *T+D* (September 2010), pp. 51–54; B. Dowell, "Succession Planning," in *Implementing Organizational Interventions*, eds. J. Hedge and E. Pulaskos (San Francisco: Jossey-Bass, 2002), pp. 78–109; and R. Barnett and S. Davis, "Creating Greater Success in Succession Planning," *Advances in Developing Human Resources* 10 (2008), pp. 721–39.

Assessing and Making Development Plans Using the Nine-Box Grid

Many companies use the nine-box grid for conducting the succession planning review. The **nine-box grid** is a three-by-three matrix used by groups of managers and executives to compare employees within one department, function, division, or the entire company.[123] The nine-box grid is used for analysis and discussion of talent, to help formulate effective development plans and activities, and to identify talented employees who can be groomed for top-level management positions in the company. As shown in **Figure 9.5**, one axis of the matrix is based on an assessment of job performance. The other axis is typically labeled "potential" or "promotability." The manager's assessment of performance and potential influences employees' development plans. For example, as shown in **Figure 9.5**, high-potential employees who are high performers are found in the top-right corner of the matrix. These are employees who should be developed for leadership positions in the company. Contrast the development plans of high-potential, high-performance employees with employees in the other areas of the grid. The development plans for employees with low potential and low performance emphasize performance improvement in their current position, rather than finding them challenging new job

FIGURE 9.5 Example of a Nine-Box Grid



Sources: Based on K. Tyler, "On the Grid," *HR Magazine* (August 2011), pp. 67–69; and D. Day, *Developing Leadership Talent* (Alexandria, VA: SHRM Foundation, 2007).

experiences. If they do not improve in their current position, they are likely to be fired. Employees in the top-left corner of the grid are outstanding performers but have low potential. These employees are likely experts in their field of expertise. Their development plans likely emphasize keeping their knowledge, skills, and competencies current and finding them experiences that will continue to motivate them and facilitate creativity and innovation. Employees who are low performers with high potential (located in the bottom-right corner of the grid) may have just taken a new position and haven't had the time to demonstrate high performance, or their knowledge, skills, or competencies might not match their job requirements. Development plans for these employees might emphasize moving them to a position that better matches their skill set, or, if they have just moved to the job, ensuring that they get the training and development opportunities and resources necessary to help them attain high performance levels. Employees in the middle of the grid, core employees, are solid but not outstanding performers who have moderate potential. Development plans for these employees will include a mix of training and development designed to help ensure that their solid performance continues. Also, core employees' development plans likely include some development experiences that can help grow their skills and determine their interest and ability to perform in positions requiring different skills and/or more responsibility.

How can companies use the nine-box grid? The process begins by clearly defining each box (e.g., what does a star performer look like?) and providing examples of desirable behavior to managers. Next, managers categorize their direct reports on the grid and then meet with other managers to compare, discuss, and defend their categorizations (a process often referred to as a *calibration meeting*). Managers use the nine-box grid to determine the development plans for their direct reports and to decide who to recommend for high-potential leadership positions or development programs. Typically, each manager's grid is consolidated into an overall grid that can represent a department, division, geographic area, and even the entire company. Collapsing the grid to higher levels of the organization provides HR and top-level managers and executives with the ability to see the mix of the potential and performance of the workforce. This information can be used to determine if the talent exists to meet strategic needs such as growing the business, where talent gaps and excesses exist, and changes in employees' performance and potential over time.

The value of the nine-box grid is that it is based on multiple and shared perspectives of talent, it helps managers provide development plans and experiences (such as mentorships, job rotations, and training opportunities) that best fit employees based on their performance and potential, and it provides a snapshot of the company's talent. For the nine-box grid to be effectively used for development and talent management, the process must include a frank and honest discussion of employees by their managers, the information gathered from the process must be discussed with employees and used to help form their development plans, and employees must be identified and placed in key job roles and given experiences needed to best use their skills in the company.

For example, Commvault, a data protection and information management solution provider, uses a more complex 16-box grid.[124] Twice a year, managers and employees meet for performance conversations. Managers use the conversation to make ratings about the extent to which employees deliver high-impact results, if they behave in ways that align with the company's values, their potential, and readiness for promotion. Using talent management software, this data is plotted on the 16-box grid that compares employees' level of performance against key objectives and their alignment with company values. Managers can use the data to review individual employees, results for a business unit, or across all employees. It helps them see where high-performing employees are located and what specific skills may be lacking across all employees. The grid is used to identify training needs, promotion candidates, and employees who can benefit from stretch assignments and mentoring.

It is important to keep in mind that performance tends to be variable over time due to changes in tasks, assignments, and business goals.[125] When managing employees' performance, the categories shown in **Figure 9.5** should be considered, but employees also should be given the chance to change. One way to do this is to have frequent performance conversations with employees to help them recognize the need to change or maintain their performance. Actively managing employees by setting expectations, making project assignments based on their skills and interests, and holding employees accountable for their performance does make a difference.

Examples of Succession Planning

Succession planning at Blue Cross Blue Shield of Michigan includes all executive-level roles.[126] Potential successors' evaluations include an evaluation of their readiness for a new position, for example, ready today or ready in three-to-five years. This has resulted in the development of considerable bench strength for executive positions. All executive positions have at least one successor identified and 75 percent of the successors are evaluated as ready today to take the position. There are also companywide reviews of all employees. HR business partners use the nine-box grid to assess performance and potential and hold talent review meetings. At ITU AbsorbTech, a company that provides absorbents used during printing and manufacturing, succession planning became a high priority because of its aging workforce.[127] It involves measuring employees' performance and potential over a two-year period and identifying high performers. Employees complete a career development plan that helps them identify the potential positions they could hold in the short and long term. Also, development activities, such as mentoring, that could help employees prepare for the positions are identified. Each position is reviewed to determine if a potential opening may occur because the employee plans to retire or is slated to move to a new position.

Turnover is common in Valvoline Instant Oil Change's industry.[128] This means that succession planning and developing bench strength is critical for all employees. Each month managers rate all their employees on their readiness for promotion to their next job level and provide an overall evaluation of when they are ready, such as "today" or "within six months." Managers work with employees on development plans designed to get them to be ready today. The development plans and evaluations are entered into an online system that allows higher-level managers to identify stores and areas where talent is not available in order to improve succession plans. Managers can identify employees, known as "blockers," who are not willing or able to develop further but are in positions that would be considered a promotion for other employees. Succession planning has initiated a demand for training across the entire career path to ensure that assistant managers are developed, as well as senior technicians who might take their jobs and new technicians who need to be ready to take on more responsibilities. Top-level managers use the online system to identify if talent is available to expand stores in a geographic area. Also, the company includes the number of managers available for promotion on its balanced scorecard, which measures company performance.

Miami Children's Hospital's succession planning involves company leaders and managers at all levels.[129] Miami Children's Hospital's CEO has conversations with other executive team members to develop the learning and development plans of leaders in key positions as well as identify succession plans. They discuss the gaps in talent and develop solutions to ensure executive-level talent is available when needed. The performance and potential of managers at all levels of the company are discussed. The CEO leads discussions for executive-level leaders and other members of the executive team lead discussions for managers working at lower levels. All managers are asked to complete development plans and identify their preferred career path.

Paychex bases succession planning on its leadership competency model.[130] Paychex uses the nine-box grid to identify leaders with high performance and potential. Potential evaluations are based on agility, ability, and aspiration. Succession candidates participate in two leadership development programs. Each succession candidate develops an individual development plan. The individual development plans are designed to meet business needs and competency gaps through development activities that are known at Paychex as the 3Es: education, exposure, and experience. A dedicated "leadership developer" works with the employee and the employee's manager to provide coaching, help with the individual development plan, and monitor progress. Last year, over 1,700 executives, senior executives, managers, and supervisors completed assessment of their leadership competencies, performance, and potential. The succession planning process at Paychex has resulted in the identification of over 25 percent of senior managers, managers, and supervisors as being ready for a promotion to the next level within one to two years; the development of succession plans for all officer and senior manager positions; and an 18 percent increase in open senior management positions filled with internal candidates.

Issues in Succession Planning

One of the important issues in succession planning is deciding whether to tell employees if they are on or off the list of potential candidates for higher-level manager positions.[131] There are several advantages and disadvantages that companies need to consider. One advantage to making a succession planning list public or telling employees if they are on the list is that they are more likely to stay with the company because they understand they likely will have new career opportunities. Another advantage is that high-potential employees who are not interested in other positions can communicate their intentions. This helps the company avoid investing costly development resources in them and allows the company to have a more accurate idea of its high-potential managerial talent. The disadvantages of identifying high-potential employees are that those not on the list may become discouraged and leave the company, or changes in business strategy or employees' performance could take them off the list. Also, employees might not believe they have had a fair chance to compete for leadership positions if they already know that a list of potential candidates has been established. One way to avoid these problems is to let employees know they are on the list but not discuss a specific position that they will likely reach. Another is to review the list of candidates frequently and clearly communicate plans and expectations. At Midmark Corporation, a medical equipment manufacturer based in Versailles, Ohio, managers identify successors every six months as part of the company's performance review process and produce a potential list of candidates. Some employees are labeled as "high professionals," that is, employees who are strong performers, happy in their current position, and unlikely or not interested in more demanding leadership positions. Other employees are identified as having high potential for leadership positions. Employees with high potential for leadership positions are considered for challenging development assignments involving overseas relocation. Using interviews, the company determines if employees on the succession list are interested and qualified for leadership positions.

Succession planning is especially important (and difficult) in family-owned businesses that face the need to identify a new leader when a parent, often the company founder, retires or dies.[132] One estimate is that fewer than one-third of family-owned businesses survive into the second generation of family members. One contributing reason is that many family businesses neglect identifying and grooming one family member as a successor or fail to take steps to develop a pool of talent of family members from which a successor can be chosen. They do so because family business owners tend to pay most of their attention to running the current business rather than focusing on and planning for the future. The typical non-family-owned business has three sets of stakeholders (staff, owners, and staff owners). But in a family-owned business it becomes more complicated because four more sets of stakeholders are added—staff-family, family-owners, family, and staff-family-owners. Some experts recommend families begin to work out succession plans seven years before the company founder plans to retire. In the first few years of succession planning, a third party should be hired to assess the value of the business so that assets can be divided among family members. Industrial psychologists or other consultants can be used to evaluate each family member's skills and personality to identify who is most capable of running the business.

Developing Managers with Dysfunctional Behaviors

A number of studies have identified managerial behaviors that can cause an otherwise competent manager to be a "toxic" or ineffective manager. These behaviors include insensitivity and aggressiveness toward others, inability to be a team player, arrogance, poor conflict-management skills, inability to meet business objectives, and inability to change or adapt during a transition.[133] For example, a skilled manager who is interpersonally abrasive, aggressive, and autocratic may find it difficult to motivate subordinates, may alienate internal and external customers, and may have trouble getting his ideas accepted by superiors. These managers are in jeopardy of losing their jobs and have little chance of future advancement because of their dysfunctional behavior. Typically, a combination of assessment, training, and counseling is used to help managers change dysfunctional behavior. For example, an executive at GroupM, the media investment arm of WPP PLC, clashed with executives outside of his area after he was promoted.[134] In his previous position, he managed 80 employees. The new position required him to oversee 500 employees. To help him, the company hired a coach from outside the organization. The coach collected anonymous feedback from 10 peers, shared it with him, and discussed what he could do differently. The peers' feedback suggested he was tough to work with because he arrogantly defended the decisions he made in his new position. The coach facilitated a meeting between executive and the peers who provided feedback. During the meeting, the executive promised he would demonstrate more patience and collaboration with them during their interactions. He also agreed to follow up with them after meetings to see if he was fulfilling his promise of exhibiting more patience and collaboration. He recently received another promotion, which would not have happened if he had not recognized the impact his behavior was having on his peers and made steps to correct it.

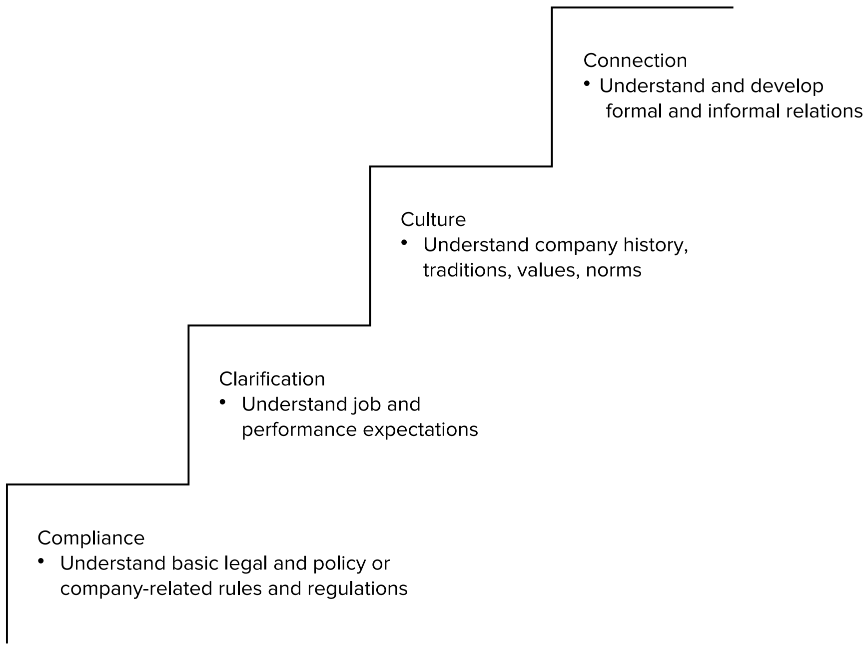
Onboarding

When new employees join a company it is important to help them adjust to their jobs by establishing personal relationships to increase satisfaction, ensuring they understand goals and expectations to improve their performance, and providing feedback, coaching, and follow-up activities to help minimize the likelihood that they will prematurely leave the company. **Onboarding** or socialization refers to the process of helping new hires adjust to social and performance aspects of their new jobs.[135] There is wide variation in the types of onboarding programs across companies. However, effective onboarding involves the four steps shown in **Figure 9.6**. Effective onboarding is a process that takes several days, weeks, or even months. As you probably have experienced, **orientation** is an event in which employees receive information about their job, the company, work rules, and travel reimbursement, complete tax forms, and learn how to complete time sheets. Socialization includes these elements of orientation but it involves much more. Socialization enhances new hires' self-confidence, helps them to feel socially comfortable and accepted by their peers and their manager, helps them understand their role and job expectations, responsibilities, and performance requirements, and helps them "fit" into and understand the company culture. Effective onboarding is related to many important outcomes for the employee and the company, including higher job satisfaction, organizational commitment, lower turnover, higher performance, reduced stress, and career effectiveness.[136]

Table 9.13 shows the characteristics of effective onboarding programs. Effective onboarding programs actively involve the new employee. Several companies offer onboarding programs that include the characteristics shown in this table.[137]

Domino's, the pizza provider, changed new employee orientation. It moved from a large-group classroom experience conducted in a central location to an individual or small-group in-store experience that a store manager facilitates. The change was made to save new employees time from having to travel to a training site rather than the store where they will work. Also, the company wanted to create a more beneficial and enjoyable first day work experience. To do so, it developed, Natalie, a virtual, animated co-facilitator who works

FIGURE 9.6 The Four Steps in Onboarding



Sources: Based on T. Allen, L. Eby, G. Chao, and T. Bauer, "Taking Stock of Two Relational Aspects of Organizational Life: Tracing the History and Shaping the Future of Socialization and Mentoring Research," *Journal of Applied Psychology* 102 (2017), pp. 324–37; T. Bauer, *Onboarding New Employees: Maximizing Success* (Alexandria, VA: SHRM Foundation, 2010); G. Chao et al., "Organizational Socialization: Its Content and Consequences," *Journal of Applied Psychology* 79 (1994), pp. 730–43.

TABLE 9.13 Characteristics of Effective Onboarding Programs

- Employees are encouraged to ask questions.
- The program includes information on both technical and social aspects of the job.
- The employee's manager has some onboarding responsibility.
- Debasing or embarrassing new employees is avoided.
- Employees learn about the company's culture, history, language, products, services, and customers.
- Follow-up of employee progress occurs at different points up to one year after joining the company.
- The program involves participation, active involvement, and formal and informal interaction between new hires and current employees.
- Relocation assistance is provided (such as house hunting or information sessions on the community for employees and their significant others).

alongside the store manager. To begin orientation, the store manager taps a button on a notebook or tablet computer and Natalie appears, providing a welcome and introductory information. She stands to one side of the PowerPoint screen, explaining the images, information, hyperlinks, and directions on display next to her. At various points during orientation, Natalie asks the store manager or the new employee to take over the session. For example, she might ask the manager to show the new employee the store, explain the work stations, and introduce the other employees working in the store. Natalie also helps the new employee and manager build a personal relationship by asking conversation building questions such as about their favorite pizza types.

C&A Industries provides staffing and recruitment services for medical businesses seeking nurse practitioners. New employees attend a 12-week onboarding program that helps them learn the basics of the recruiting and staffing industry such as how to overcome objections and build relationships. They are assigned a trainer and a manager who serves as a mentor for the first three weeks of the program. In the remaining eight weeks of the program, the new hires work in their jobs and meet weekly with their mentors. Following participation in the onboarding program, over the next 12 weeks, the new hires take three professional development courses that help them further their communications and relationship-building skills.

At Van Meter Inc., a wholesale industrial and electrical supplier, its onboarding program uses gaming principles. In the year-long program, new employees earn badges by completing in-person sessions led by company executives, online learning, self-paced activities, and personal essays. The new employees are supported by a company ambassador assigned to them and in-person meetings with their manager.

Due to the COVID-19 pandemic, companies have had to rely on virtual onboarding to help new employees make personal connections with colleagues and managers who they have not met in person. Also, despite being hired before or during the pandemic, new employees still needed to learn what they need to know to start working.[138] Accenture's online onboarding sessions involve new employees attending sessions about company processes and benefits. They create teams of employees who are in similar roles for focused training and team-building activities. At Calendly, a software company, new employees usually have lunch with their managers. But during the pandemic, the company had food delivered to each new hire and their managers and they ate together while videoconferencing. Strata, a company that provides technology software and services to hospitals and health-care systems, sends a computer, along with instructions on how to log in and access videoconferencing, to new hires before their first day of work. That is followed by a talk with Strata's CEO who welcomes each employee to the company and explains its mission and vision. To enhance virtual onboarding, Strata uses projects, quizzes, and small-group discussions to enhance the virtual experience.

Summary

This chapter emphasized the various development methods that companies use: formal education, assessment, job experiences, and interpersonal relationships. Most companies use one or more of these approaches to develop employees. Formal education involves enrolling employees in courses or seminars offered by the company or educational institutions. Assessment involves measuring the employee's performance, behavior, skills, or personality characteristics. Job experiences include job enlargement, rotating to a new job, promotions, or transfers. Involvement in mentoring and reverse mentoring can help employees better understand the company and how to use new technology, as well as gain exposure and visibility to key persons in the organization. Part of a manager's job responsibility may be to coach employees. Regardless of the development approaches used, employees should have a development plan to identify (1) the type of development needed, (2) development goals, (3) the best approach for development, and (4) whether development goals have been reached. For development plans to be effective, both the employee and the company have responsibilities that need to be completed. The chapter concluded by discussing important issues in employee development, including succession planning, dealing with dysfunctional managers, and onboarding.

Key Terms

development *377*

protean career *377*

psychological success *378*

development planning or career management system *379*

self-assessment *380*

reality check *381*

goal setting *381*

action plan *383*

formal education programs *386*

tuition reimbursement *388*

assessment *389*

Myers-Briggs Type Inventory (MBTI) *390*

assessment center *391*

leaderless group discussion *391*

interview *391*

in-basket *391*

role play *391*

performance appraisal *392*

upward feedback *392*

360-degree feedback *392*

job experience *394*

stretch assignment *394*

job enlargement *395*

job rotation *395*

transfer *398*

promotion *399*

downward move *399*

temporary assignment *400*

sabbatical *400*

volunteer assignment *401*

mentor *402*

group or peer mentoring program *402*

career support *405*

psychosocial support *405*

reverse mentoring *405*

coach *406*

succession planning *407*

high-potential employee *407*

bench strength *407*

nine-box grid *408*

onboarding *413*

orientation *413*

Discussion Questions

1. How could assessment be used in an employee development program?
2. List and explain the characteristics of effective 360-degree feedback systems.
3. Why do companies develop formal mentoring programs? What are the potential benefits for the mentor? For the protégé?
4. What is reverse mentoring? How does it benefit the mentor? The protégé?
5. Your boss is interested in hiring a consultant to help identify potential managers among current employees in a fast-food restaurant. The manager's job is to help wait on customers and prepare food during busy times, oversee all aspects of restaurant operations (including scheduling, maintenance, on-the-job training, and food purchase), and help motivate employees to provide high-quality service. The manager is also responsible for resolving disputes that might occur between employees. The position involves working under stress and coordinating several activities at one time. Your boss asks you to outline the type of assessment program that you believe would do the best job of identifying employees who will be successful managers. What will you tell her?
6. Many employees are unwilling to relocate because they like their current community, and their spouses and children prefer not to move. Yet employees need to develop new skills, strengthen skill weaknesses, and be exposed to new aspects of the business to prepare for management positions. How could an employee's current job be changed to develop management skills without having to relocate them?
7. What is coaching? Is there one type of coaching? Explain.
8. Why should companies be interested in helping employees plan their development? What benefits can companies gain? What are the risks?
9. What types of career management approaches do companies use? Explain the approaches and how they differ.
10. What are the manager's roles in a development system? Which role do you think is most difficult for the typical manager? Which is the easiest role? List the reasons why managers might resist involvement in career management.
11. What should be included in a development plan? What do you think is the most important part of the plan for ensuring that employees develop? Explain your choice.
12. Should a company identify and formally acknowledge its high-potential managers or should this be kept secret? Should managers know they are considered high-potential managers? Explain.
13. Nationwide, an insurance company based in Columbus, Ohio, uses the nine-box grid for its succession review. What type of development plans and activities would you recommend for solid but not outstanding performers with moderate leadership potential? How would these plans differ from plans for employees with high potential and high performance (stars)? Explain.
14. What are the potential advantages and disadvantages of using the nine-box grid for talent reviews?
15. Explain the four steps in onboarding. What should new hires learn at each step? How might social media or the Internet aid the onboarding process?
16. What is bench strength? Is it important for companies to have bench strength? Why? How does succession planning influence a company's bench strength?
17. What are some of the challenges of succession planning for family businesses?
18. What are the characteristics of effective onboarding programs? How can virtual onboarding still include those characteristics?

Application Assignments

1. Watch the YouTube video about Bosch's rotational program at www.youtube.com/watch?v=1R2uyVmrP14. What are the strengths and weaknesses of this program? Do you think this program helps Bosch attract and retain talent? Explain.
2. Watch the YouTube video about ABB company at www.youtube.com/watch?v=ih6Au7sjOz8. Why is employee development important at ABB? How does ABB help employees develop?
3. Watch the YouTube video about Bank of America at www.youtube.com/watch?v=MegTV8Si38A. Also, review https://careers.bankofamerica.com/en-us/benefits/career-growth. Identify how Bank of America helps employees develop and grow in their careers. Discuss how what they do relates to the discussion of careers and development in this chapter.
4. Watch the YouTube video about the employee training and development plan used by the State of North Carolina Department of Transportation (NCDOT) at www.youtube.com/watch?v=yKFta1zfC8o. What parts of its process contribute to the effectiveness of the development plan? What else might NCDOT consider for improving the planning process?
5. W. L. Gore makes products that are used for medical implants, fabric laminates, and fuel cells (you might have shoes, gloves, or a jacket that includes its fabric, which is waterproof, windproof, and breathable). Watch the video about W. L. Gore's culture at www.youtube.com/watch?v=8AhCqmdVAF8. How does sponsorship help develop employees? Does sponsorship help create a learning culture at Gore? Explain.
6. MentorcliQ is an example of mentoring matching software. Watch the YouTube video about MentorcliQ at www.youtube.com/watch?v=pAzr5Sz2yIw. Is matching mentors and protégés important for ensuring the relationship is effective? Explain your answer. How does mentoring matching software such as MentorcliQ help increase the likelihood that a mentoring relationship will be successful?
7. Crotonville is the site of General Electric's global leadership development institute. Watch the video about Crotonville at www.youtube.com/watch?v=PzHyoHlJCIY. How does Crontonville help GE develop strong leaders? Explain how Crontonville contributes to GE's business.
8. Go to www.suffolk.com to gain an understanding of Suffolk Construction's business and the clients it serves. Go to www.suffolk.com/careers/career-journey and then list and briefly describe the types of development opportunities Suffolk Construction provides its employees. Why do you think Suffolk Construction invests in employee development?
9. Artificial intelligence is increasingly being used for coaching employees. Watch the video on LEADx's coaching solution at www.youtube.com/watch?v=gSLcGWUe3hU. Also, visit Leadx website at https://leadx.org/hr-ai-chatbot-coach to learn more. What are the potential advantages and disadvantages of an AI-based coach? Should AI-based coaching replace or complement face-to-face coaching? Explain your answer.

Case: *Mentoring at Roscoe Property Management (RPM)*

When RPM, a management company of apartment communities, doubled in size, it experienced high employee turnover, especially among new employees located in small rental markets. RPM developed a mentoring program with the goal of reducing turnover of new employees by 50 percent and among experienced employees by 25 percent. The mentoring program includes formal e-learning courses and group mentorship via Skype or GoToMeeting. Employees who were selected as mentors were high performers who were identified as having promotion potential. Employees apply to serve as a mentor and have to receive approval by their regional manager. The mentors receive training to make sure they understand policies and procedures and learn how to audit if their protégé is following the established standards. They also receive soft skills training on how to provide feedback to protégés and their supervisors. They are asked to mentor new employees who hold their same position. The mentors meet online weekly with their protégés to coach them on their newly learned skills and provide advice on topics such as RPM's policies and requirements. RPM found that new employee turnover has decreased by 85 percent and turnover for employees with two years or more of tenure has decreased by 50 percent. New employees found the additional feedback and policy expertise they received from their mentors to be valuable. Mentors liked the opportunity to improve their coaching and feedback skills through interacting with their protégés. The mentoring experience helped them prepare for their next position at RPM where coaching employees and providing feedback are critical to their effectiveness.

What characteristics of this mentoring program contribute to its effectiveness? Does this program contribute to employees' development and career needs? How? Explain your answer.

Source: Based on P. Harris, "Finding the Perfect Solution," *TD* (2020 Best Practices): 48–52.

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Case 3 Learning in Practice

Building a Workforce at Huntington Ingalls Industries

Huntington Ingalls Industries (HII) is the largest U.S. shipbuilding company serving the military; its products include aircraft carriers, submarines, Coast Guard cutters, and more. A military ship is a hugely complex product, and the sailors' lives depend on it being precisely made to specifications. To meet its motto of "Hard stuff done right" in the hands-on work of shipbuilding, HII combines careful hiring with a commitment to training. Overall, to ensure a pool of qualified employees and to improve the communities where HII operates they invest more than $110 million a year in workforce development—from early childhood education to post-hire training programs.

Building military ships is highly specialized, possibly requiring a military clearance as well as technical skills and physical strength, so positions are hard to fill. HII finds educated, strong people and then trains them to do the job. One aspect of training is a set of apprenticeship programs. These run for four to eight years and combine classroom learning with on-the-job training. The latter may include training in crafts like welding and pipe fitting or in specialized areas such as rigging or nuclear testing. The program at the Newport News, Virginia, shipbuilding facility covers 19 trades, along with the choice to participate in eight advanced programs. Another facility, in Mississippi, offers apprenticeships in 13 trades. The two programs together have 130 instructors, many of whom themselves attended one of the schools. Employees are paid for a 40-hour week, including their time on the job and in classes. A first-year apprentice can earn $35,000 a year, with raises bringing the salary up to $58,000 after completion of the program—and because the program is paid for, they graduate without student loans to repay. The training culminates in an apprentice degree that comes close to meeting the standards for an associate's degree, so employees with a desire to continue on toward a college degree are well on their way. Employees who stay with HII for 40 years also can apply that experience to becoming designated a master shipbuilder. HII's 1,400 master shipbuilders are another source of instructors for its apprenticeship program. To help insure that it has a pool of new workers has the skills needed for shipbuilding, HII invests in pre-hire training programs in basic skills needed to become an electrician, welder, pipefitter, or shipfitter. The courses which range in length from four to twelve weeks are free to job applicants and are held at the company or at a local community college or high school.

Another way in which HII seeks excellence through training is in its use of technology. Several years ago, it began researching ways to employ "augmented reality" in business applications including training. Augmented reality refers to displaying an overlay of digital information over a view of the physical world, the way football broadcasts on television draw lines on the field to illustrate plays. In HII's training, it is used for showing the steps required to operate equipment while the trainee is at the equipment, viewing it on a tablet computer. HII's success with this method has drawn the interest of the U.S. Navy, which may begin using HII's augmented-reality technology to help sailors learn how to conduct maintenance.

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Questions

1. How does the apprenticeship and augmented reality training described in the case facilitate learning? Transfer of training?
2. What evaluation outcomes should Huntington Ingalls measure to determine the effectiveness of its apprenticeship program? Pre-hire training? Augmented reality training?
3. What challenges do you think that Huntington Ingalls faces in designing apprenticeship programs? Explain your answer.

PART FOUR

Social Responsibility and the Future

Chapter Ten, “Social Responsibility: Legal Issues, Managing Diversity, and Career Challenges,” focuses on how training contributes to a company’s social responsibility through partnerships with unions, community colleges, and other educational institutions. Also, socially responsible companies take steps to manage diversity, equity, and inclusion; help employees work effectively in different cultures; and prepare them to cope with career challenges like balancing work and life, coping with career breaks, recycling their careers, dealing with job loss, and preparing for retirement.

Chapter Eleven, “The Future of Training and Development,” discusses how training and development will evolve in the future. Many factors will influence the future of training and development, including automation and the development of new technology, which can affect how training is delivered and the quality and realism of instruction; the increased emphasis on quicker, yet effective methods that can be used to develop learning; and the increased emphasis on using big data to show the relationship between training, development, and business results.

Part Four concludes with a case that explores how Eastern Bankshares is trying to improve the diversity of its top management positions.

CHAPTER TEN

Social Responsibility: Legal Issues, Managing Diversity, and Career Challenges

Objectives

After reading this chapter, you should be able to

10-1 Discuss the role of training partnerships in developing skills and contributing to local communities.
10-2 Discuss the potential legal issues that relate to training.
10-3 Develop a program for effectively managing diversity.
10-4 Design a program for preparing employees for cross-cultural assignments.
10-5 Discuss the importance of career paths and dual career paths for employees and companies.
10-6 Develop policies to help employees achieve work-life balance.
10-7 Describe how companies are helping veterans develop skills and find employment.
10-8 Explain the value of phased retirement programs for older employees.

Diversity, Equity, and Inclusion at Siemens USA

Siemens USA includes 50,000 employees working in many different business areas. The company is known as a leader in power generation and distribution, intelligent infrastructure, and distributed energy systems. The company's diversity, equity, and inclusion (DEI) focus areas include workplace, workspace, and the marketplace. To support the workplace pillar, Siemens strives to create a culture where everyone is valued. One way to accomplish this is through its ten employee resource groups. These groups are based on affinity and gender but also include other interests such as those related to veterans (Siemen's Veterans Network), individuals focused on climate change (Green), and supporters of people with special needs (SiemensAbility). The resource groups provide a supportive community that provide opportunities to network, find a mentor, and facilitate personal and professional development.

At Siemens USA, DEI efforts are a result of a collaboration between employees responsible for DEI and those working in the learning function. The head of DEI works closely with the learning staff to help formulate the DEI strategy and direction, understand what the business needs, and decide how the learning staff can provide support. One of the products of this collaboration is the use of the company's learning management system (My Learning World), which employees can access through mobile devices or online to access a

Strengths in Diversity channel. This channel gives employees access to DEI resources, including microlearning, e-learning, and assessments, as they need them. These resources cover topics such as unconscious bias, how to build relationships, benefits of diversity in the workplace, understanding neurodiversity and celebrating it in making business decisions, and how to promote equity and inclusion. Learning staff have developed actionable tips for managers to give to employees during their shift meetings. For example, one of the actionable tips provides information on what they can do if they experience stereotypes in the workplace.

The content on My Learning World is frequently reviewed and new content is added. For example, a recent addition was a Racial Justice Knowledge Board. Also, DEI staff and learning staff have encouraged and prepared managers to have conversations with employees about racial justice. Trained coaches help to prepare managers to have these conversations with their employees. For the conversations to be effective, managers have to at all times model the behavior they want to see and commit to following up on any actions that are agreed upon. DEI and learning staff found that although these conversations were difficult to have, they were invaluable. Employees learned from each other's experiences, recognized behaviors that could intentionally or unintentionally cause racial harm and identified ways to both reduce racial injustice and support racial equity within the company. The DEI and learning teams believe that all of their efforts have helped moved toward creating a safe culture that minimizes injustice through employees gaining a better understanding of others' perspectives and experiences.

Sources: Based on L. Lang and N. Grant, "Two Teams, One Goal," *T+D,* December 2020, pp. 46–51; "Siemens USA: Our Mission for Diversity, Equity, and Inclusion (DEI)," from https://new.siemens.com/us/en/company/about/diversity.html, accessed February 7, 2021.

Introduction

Training and development should help companies achieve their business goals, resulting in profits and, for publicly traded companies, positive returns to stockholders. But stockholders represent only one of the parties (or stakeholders) that have an interest in a company's success. Other important stakeholders include the local community and employees who can also benefit from training and development. Companies have a social responsibility to help improve the communities where they are located by protecting the environment, supporting cultural activities, and helping reduce poverty and unemployment. For example, companies can develop partnerships with schools, community colleges, and universities to design programs that increase the skills of the workforce. These partnerships benefit the company because they provide a source of skilled employees. They also contribute to the local community because they improve the skill level of the local labor market. This helps keep employers from moving to other locations in the United States and abroad to find the skills they need and can help attract new employers. The first section of this chapter discusses the different types of training partnerships that companies are participating in with schools, unions, and nonprofit organizations to provide them with skilled workers.

Social responsibility also means that companies need to comply with laws and regulations. Perhaps more importantly, companies have a social responsibility to take actions and create conditions to help all employees grow, develop, and contribute to company goals regardless of their background. As the Siemens USA opener highlights, this includes making diversity, equity, and inclusion a priority, an ongoing collaborative effort, and a topic that is not avoided but is openly discussed. The second section of the chapter discusses how laws and regulations influence training and development and how to ensure the talents and skills of a diverse workforce are best used. This includes managing diversity and inclusion, melting the glass ceiling that women face in trying to achieve higher-level management positions, and preparing employees to work in cross-cultural assignments. The final section of the chapter discusses specific career challenges that employees face—balancing work and life, career breaks, coping with job loss, job hopping and recycling careers, and retirement—and what employers can do to help them manage and cope.

Training Partnerships

Government agencies, trade groups, foundations, and companies are working with schools to develop employee skills and provide jobs. **Sector partnerships** refer to government agencies and industry trade groups that help identify the skills that local employers require and work with community colleges, universities, and other educational institutions to provide qualified employees. Sector partnerships can focus on jobs that require more than a high school diploma but less than a four-year college degree, and some provide skills that are needed for professional employees such as engineers. Through such partnerships, workforce skill needs can be met faster than if individual employers worked alone. Job Corps is a career and technical training program funded by Congress and administered by the U.S. Department of Labor.[1] Job Corps provides training free of charge for young people between the ages of 16 and 24 in academic, information technology, and vocational skills. Job Corps also provides tuition-free housing, meals, basic health care, a living allowance, and career transition assistance. One hundred and twenty-three Job Corps centers train over 60,000 students each year. Nearly 82 percent of Job Corps graduates in the last five years were placed in education programs, the military, or fulfilling careers after graduation. Job Corps graduates obtain jobs in high-demand industries including masonry, carpentry, and nursing. Troy Carter dreamed of becoming a music industry success and received his GED from a Job Corps center in Maryland. The founder, chairman and CEO of Atom Factory, a talent management and full-service film and television production company, he has worked with Sean "Diddy" Combs, Nelly, Will Smith, Lady Gaga, and John Legend among his clients.

Some programs are specifically directed at helping the hard-to-employ, such as low-income or homeless people, individuals with a criminal record, or persons with disabilities, to escape the poverty cycle through learning marketable skills that will lead to employment. For example, PepsiCo is working with Disability Solutions to attract and hire employees with disabilities.[2] Pepsi's Achieving Change Together (ACT) program includes training Pepsi leaders on best practices for hiring and working with individuals who have disabilities, increasing their awareness of different types of disabilities, and providing tips and best practices for learning and productivity strategies that could help maximize the performance of disabled employees. The ACT program also focuses on preparing individuals with disabilities to enter (or reenter) the workforce by focusing on résumé building, interviewing skills, and if they are veterans, teaching them how to represent and translate their military skills and experiences when seeking civilian employment. While many of the job seekers trained as a result of Pepsi ACT have found work at PepsiCo, others have found employment elsewhere. This has helped PepsiCo build its talent pool as well as contribute to local communities.

Consider how the following partnerships are preparing employees for work in specific industries or jobs or helping displaced workers develop skills needed to obtain new jobs. Cognizant, a global technology company, created a partnership with Per Scholas, a nonprofit information technology training program in New York City, to increase the diversity of job candidates for positions in the technology industry.[3] Most of the learners are people of color and one-third are women. The learners include those who have associates degrees who have not been able to find a job, parents who have been out of the workforce for a long time, and high school graduates who cannot afford to pursue a college degree. Cognizant and Per Scholas worked together to create tuition-free training programs in cybersecurity, information technology support, systems administration, and web-development. The programs include hands-on technical training using case studies, business and soft skills courses, and access to career coaches. Program graduates are guaranteed an interview with Cognizant or another company.

Utility companies are also collaborating with colleges and labor unions to develop and promote online education and other types of training to ensure the utility industry has a skilled workforce. For example, one partnership with Bismark State College provides apprentices with the foundational skills needed to understand electrical systems, electrical components, and transformers.[4] In the Electric Power Technology program, apprentices take online courses developed by industry experts as part of their required technical instruction. These courses are specifically designed to support necessary on-the-job learning that is part of the apprenticeship program.

Aon's mission is to empower economic and human possibility.[5] Aon partnered with the City College of Chicago's Harold Washington College to offer apprenticeship programs in insurance, technology, and human resources. During the apprenticeship, students are regular, full-time Aon employees, working in real jobs. Aon supports the apprentices by providing a paid tuition benefit and work hours that allow them to pursue an associate's degree. Students spend about 20 hours in class and 20 hours working each week for two years. Aon is expanding its apprenticeship program to six new cities in the United States with an investment of $30 million over the next five years. Coalfield Development Corporation, a West Virginia nonprofit organization, helps laid-off workers and coal miners in the Appalachia region prepare for new jobs.[6] Trainees have to complete 33 hours of paid work, six hours of community college classes, and three hours of life skills classes each week in the two-year program. The goal for trainees is to earn an associate's degree and the professional certification needed to get jobs in fields such as solar installation, asbestos removal, woodworking, and agriculture (e.g., reclaiming strip mines for farming blueberries, blackberries, and herbs).

Federal legislation encourages partnerships between educational institutions, employers, and labor unions. The **Strengthening Career and Technical Education for the 21st Century Act** was created to improve career and technical education. The legislation is focused on ensuring that all students can benefit from career and technical education to prepare them for employment. Provisions in the act allow school districts to use federal funds to provide all students expanded access to career exploration and skill development activities in the middle grades and more comprehensive academic counseling in high school.

The **School-to-Work Opportunities Act** is designed to assist the states in building school-to-work systems that prepare students for high-skill, high-wage jobs or future education. The act encourages partnerships between educational institutions, employers, and labor unions. The act requires that every school-to-work system include work-based learning, school-based learning, and connecting activities that match students with employers and bring classrooms and workplaces together. Wisconsin has one of the most fully developed school-to-work programs. Apprenticeships are offered in 13 fields ranging from tourism to engineering. Committees of employers and educators develop the skill sets to be covered and identify appropriate classroom and work experiences. For example, the Wisconsin Health Science Youth Apprenticeship Program focuses on different paths in health sciences, including therapeutic services (dental, nursing, medical assistant), informatics (patient data management), and ambulatory/support services (dietary, laboratory, optometry).[7] The program provides high school juniors or seniors with the skills and knowledge needed for these careers through integrating classroom and on-the-job learning.

The **Workforce Innovation and Opportunity Act (WIOA)** is designed to help job seekers access employment, education, training, and support services to succeed in the labor market and to match employers with the skilled workers.[8] WIOA streamlined workforce development systems by eliminating existing programs and established a common set of metrics for evaluating remaining programs. It also provides states with the flexibility to direct funds to develop skills needed in their region and for their workforce and supports access to on-the-job training and development opportunities. Finally, WIOA ensures that individuals with disabilities have the necessary skills to be successful in employment and improves outreach to out-of-school youth and high school dropouts. The cornerstone of the system is One-Stop service delivery, which unifies numerous training, education, and employment programs into a single, customer-friendly system in each community. The underlying notion of One-Stop is the coordination of programs, services, and governance structures so that customers have access to a seamless system of workforce investment services. It is envisioned that a variety of programs could use One-Stop's common intake, case management, and job development services in order to take full advantage of the system's potential for efficiency and effectiveness. A wide range of services, including training and employment programs, are available to meet the needs of employers and job seekers. The challenge in helping One-Stop live up to its potential is to make sure that the state and local boards can effectively coordinate and collaborate with the network of other service agencies, including Temporary Assistance for Needy Families (TANF) agencies, transportation agencies and providers, metropolitan planning organizations, child care agencies, nonprofit and community partners, and the broad range of partners who work with youth.

Electric Boat is a submarine designer and builder located in Groton, Connecticut.[9] But the company can't find enough employees with the necessary skills. In fact, it estimates that it needs to hire between 15,000 and 18,000 new employees by 2030. To deal with this problem, Electric Boat has doubled its annual training budget and is coordinating its hiring efforts with the Eastern Connecticut Workforce Investment Board, a nonprofit agency mandated by WIOA. Over 4,000 people have enrolled in a skills and work-readiness training program provided by the agency. Six hundred have completed the training and have been hired by Electric Boat and other employers.

O*NET, the Occupational Information Network, is a unique, comprehensive database and directory of occupational titles, worker competencies, and job requirements and resources.[10] O*NET, which supports One-Stop service delivery, is the primary source of occupational information in the United States. The O*NET database includes information on skills, abilities, knowledge, work activities, and interests associated with occupations. O*NET information can be used to facilitate career exploration and vocational counseling. Job seekers can use O*NET to find out which jobs fit with their interests, skills, and experience and to identify the skills, knowledge, and abilities needed for their dream job.

Joint Union-Management Programs

The initial goal of joint union-management programs was to help displaced employees find new jobs by providing skill training and outplacement assistance. Currently, **joint union-management training programs** provide a wide range of services designed to help employees learn skills that are directly related to their jobs and also develop skills that are "portable"—that is, valuable to employers in other companies or industries.[11] Both employers and unions contribute money to run the programs, and both oversee their operation. The National Coalition for Telecommunications Education and Learning (NACTEL) is a partnership between telecommunications companies, including AT&T, Lumen, Frontier Communications, Verizon Communications, and labor unions, including the Communication Workers of America (CWA) and International Brotherhood of Electrical Workers (IBEW), which have developed online education programs.[12] NACTEL includes courses that allow employees to work toward associate's degrees (e.g., in telecommunications) and certificate programs (e.g., Introduction to Telecommunications). The NACTEL programs are offered by Pace University's School of Computer Science and Information Systems.

The Utility Workers Union of America (UWUA) established the Utility Workers Military Assistance Program (UWMAP) in Chicago with the local union and Peoples Gas.[13] The purpose of the program is to help place military veterans into skilled careers. The partnership was established based on the need for employees to help Peoples Gas upgrade thousands of miles of aging natural gas infrastructure within Chicago. During the seven-month program, veterans develop the technical skills needed to work in the natural gas industry through on-the-job training and classroom instruction administered by the City Colleges of Chicago. Participants who complete the program earn college credits toward their associate degree and receive full-time technical positions at Peoples Gas. To date, the company has hired over 400 veterans from the program.

Legal Issues and Managing a Diverse Workforce at Home and Abroad

Legal Issues

Table 10.1 shows potential training activities and situations that can make an employer vulnerable to legal actions and harm the company's reputation. The following sections describe each situation and potential implications for training.[14]

TABLE 10.1 Situations That May Result in Legal Action

- Failing to provide required training or providing inadequate training
- Incurring employee injury during a training activity
- Incurring injuries to employees or others outside the training session
- Breach of confidentiality or defamation
- Reproducing and using copyrighted material in training classes without permission
- Excluding women, minorities, and older Americans from training programs
- Failing to ensure equal treatment of all employees while in training
- Requiring employees to attend training programs that they may find offensive
- Revealing discriminatory information during a training session
- Not making accommodations for trainees' religious beliefs or disabilities
- Incorrectly reporting training as an expense, failing to report training reimbursement as income, or failing to pay employees for attending training

Failing to Provide Training or Providing Inadequate Training

To comply with a wide range of laws and regulations, companies are required to show that employees not only have completed training programs, but also are applying their new knowledge on the job. Most companies provide training to reduce the potential for a hostile work environment for employees protected by Title VII of the Civil Rights Act (covering race, color, gender, religion, nationality, and national origin), the Age Discrimination in Employment Act (ADEA, which covers age), or the Americans with Disabilities Act (ADA, which covers disabilities).[15] For example, the U.S. Supreme Court considers sexual harassment training to be an important factor for companies that wish to avoid punitive damages in sexual harassment cases. Employers must also train employees to comply with practices designed to prevent harassment of any class protected by Title VII.

Federal laws may require a certain number of training hours and types of training for employees in certain industries. For example, initial training for flight attendants must include how to handle passengers, use galley equipment, evacuate the airplane, and use the public address system. The safe landing of U.S. Airways Flight 1549 on the Hudson River in 2009 was one of the rare moments when a U.S. passenger plane completed a forced landing without loss of life of passengers or crew. As a result, the Federal Aviation Administration (FAA) implemented new training regulations and rules for airlines, calling for hands-on drills on the use of emergency equipment and procedures for all flight attendants.[16] The FAA has also introduced training standards requiring scenario-based simulations to help pilots operate today's new aircraft, which have integrated systems, greater speed, range, and altitude, and new multifunctional flight displays.[17]

Companies in health care are required to comply with the Health Insurance Portability and Accountability Act (HIPAA); companies in finance are required to comply with the Bank Secrecy Act; and companies in the gaming industry (such as casinos) are required to train employees on how to handle money and report suspicious activity.[18] The increase in the number of incidents in the United States in which the use of force by police officers has been questioned has resulted in increased scrutiny of their training. For example, a murder charge brought against a police officer in the shooting of a fleeing man has resulted in examining whether the 12 weeks of basic training for officers is long enough and whether enough attention is given to when and how to use force in dealing with the public.[19] The Dr. Chris Kirkpatrick Whistleblower Protection Act of 2017 requires federal agencies to train their supervisors each year on how to respond to whistleblower complaints.[20] A whistleblower is someone who alerts responsible parties about illegal activity or unsafe practices. Dr. Kirkpatrick reported unsafe medical practices at a Veteran's Administration medical center. He committed suicide after he was fired for reporting the practices. Legislation can also require training that is related to providing a drug-free workplace (e.g., training about drug abuse and making counseling available) and a safe workplace (e.g., training about the handling of hazardous materials and the use of safety equipment as dictated by the Occupational Safety and Health Act, or OSHA).

Incurring Employee Injury During a Training Activity

On-the-job training (OJT) and simulations often involve the use of work tools and equipment (e.g., welding machinery, printing press) that could cause injury if incorrectly used. Workers' compensation laws in many states make employers responsible for paying employees their salary and/or providing them with a financial settlement for injuries received during any employment-related activity such as training. Managers should ensure that (1) employees are warned of potential dangers from incorrectly using equipment and (2) safety equipment is used.

Incurring Injuries to Employees or Others Outside a Training Session

Managers should ensure that trainees have the necessary level of competence in knowledge, skills, and behaviors before they are allowed to operate equipment or interact with customers. Even if a company pays for training to be conducted by a vendor, it is still liable for injuries or damages resulting from the actions of poorly, incorrectly, or incompletely trained employees. A company that outsources training to a vendor or consultant should ensure that the vendor has liability insurance and the trainers are competent, as well as determine if there has been previous litigation against the trainer or the vendor providing the training. Also, trainers should be sure to keep copies of notes, activities, and training manuals that show that training procedures were correct and that the steps provided by licensing or certification agencies (if appropriate) were followed.

Incurring Breach of Confidentiality or Defamation

Managers should ensure that information placed in employees' files regarding performance in training activities is accurate. Also, before discussing an employee's performance in training with other employees or using training performance information for promotion or salary decisions, managers should tell employees that training performance will be used in that manner.

Reproducing and Using Copyrighted Material in Training Classes without Permission

Copyrights protect the expression of an idea (e.g., a training manual for a software program) but not the ideas that the material contains (e.g., the use of help windows in the software program).[21] Copyrights also prohibit others from creating a product based on the original work and from copying, broadcasting, or publishing the product without permission.

The use of videotapes, learning aids, manuals, and other copyrighted materials in training classes without obtaining permission from the owner of the material is illegal. Managers should ensure that all training materials are purchased from the vendor or consultant who developed them, or that permission to reproduce materials has been obtained. Material on Internet sites is not necessarily free from copyright law.[22] Many websites and published material are governed by the fair use doctrine, which means that you can use small amounts of copyrighted material without asking permission or paying a fee so long as the use meets four standards. The standards relate to (1) the purpose for which the copyrighted materials are being used, (2) what the copyrighted work is, (3) the proportion of the copyrighted material you are using, and (4) how much money the copyright owner can lose as a result of the use. Republishing or repackaging under your own name material that you took from the Internet can be a violation of copyright law. For example, Crisp Learning, a small training company, frequently finds itself in court defending copyright issues. Crisp Learning develops and sells video and training courses that deal with skills such as business report writing and time management. The series of courses, known as the Fifty-Minute series, is popular because it is easily applied and can be completed in a short period of time. Crisp Learning has found that copyright violators have actually retyped its books and sold them as their own work.

Violating copyright can be expensive. Copyright violators can end up paying expensive legal fees and paying damages that are more expensive than what it would have cost to legally purchase the training materials. To obtain copyright permission, you need to directly contact the owners of the material and explain how the material will be used and how ownership will be cited. Another way to get copyright permission is to seek permission from organizations such as the Copyright Clearance Center (www.copyright.com).

Excluding Women, Minorities, and Older Employees from Training Programs

Two pieces of legislation make it illegal for employers to exclude women, minorities, or older persons from training programs. **Title VII of the Civil Rights Act of 1964** (amended in 1991) makes it illegal to deny access to employment or deprive a person of employment because of the person's race, color, religion, gender, or national origin. The **Age Discrimination in Employment Act (ADEA)** prohibits discrimination against persons who are aged 40 or older. The Equal Employment Opportunity Commission (EEOC) is responsible for enforcing both the Civil Rights Act and the ADEA.

Although these two pieces of legislation have existed for several years, a study by the U.S. Department of Labor found that training experiences necessary for promotion are not as available or accessible to women and minorities as they are to white males.[23] Women, minorities, and older employees sometimes are illegally excluded from training programs, either by not being made aware of opportunities for training or by purposeful exclusion from enrollment in training programs. Denial of training opportunities and better treatment of younger employees can be used to support claims of age discrimination.[24] Older employees may bring lawsuits against companies based on a denied promotion or discharge. As evidence for age discrimination, the courts will investigate whether older workers were denied training opportunities that were provided to younger workers. To avoid age discrimination in training, managers and trainers need to ensure that the organization's culture and policies are age-neutral. Decisions about training and development opportunities should not be made on the basis of stereotypes about older workers and should take into account job-relevant factors such as performance. Managers should be held accountable for fair training and development practices and for ensuring that all employees have development plans. Finally, all employees should receive training on the ADEA and on how age stereotypes can affect treatment of older employees. Stereotypes such as "Older workers are resistant to change" may result in exclusion of older workers from training and development programs.

The University of Phoenix had to pay over $1 million for demonstrating a religious bias against non-Mormon employees who worked as enrollment counselors in the university's Online Division.[25] The religious bias occurred when tuition waivers for non-Mormon employees were denied for failing to meet student registration goals, yet waivers were provided to Mormon employees who failed to meet the same goals.

New Prime, Inc., a large trucking company, violated federal law by discriminating against female truck driver job applicants when it required that they be trained only by female trainers.[26] Training was provided for male job applicants with no delay, but female job applicants were put on a waiting list, resulting in delaying or denying them jobs.

The Paul Hall Center for Maritime Training and Education (Paul Hall Center) and Seafarers International (SIU) had to pay a $625,000 settlement resulting from a EEOC charge that its age restriction, which limited program participants to those under age 40, violated the ADEA.[27] The age restriction was based upon the stereotype that older individuals would not succeed in a physically and mentally demanding apprenticeship program. The settlement also requires the Paul Hall Center and SIU to not require any upper age limit and to train employees in charge of recruiting, selecting, and admitting new program participants in federal anti-discrimination laws.

Failing to Ensure Equal Treatment of All Employees While in Training

Equal treatment of all trainees means that conditions of the learning environment, such as opportunities for practice, feedback, and role playing, are available for all trainees regardless of their background. It also means that all trainees are given similar physical and financial resources necessary to be successful. Also, trainers should avoid jokes, stories, and props that might create a hostile learning environment. For example, because of claims that female employees were being harassed at air traffic control centers, the FAA required employees to attend diversity training where male employees were made to experience what it felt like to be taunted and jeered at as they walked down the aisle in an air traffic control facility (known as "walking the gauntlet"). One of the male employees found the experience to be distasteful and psychologically stressful, sued the FAA, and won.

Merrill Lynch was sued by an African American broker for race discrimination.[28] The case was settled for $160 million, which was distributed to 1,400 black brokers. Only 2 percent of Merrill's financial advisers were African Americans and they were less likely than white brokers to be top producers. Although Merrill ran several programs designed to help black brokers succeed by bringing in clients, black brokers were less likely to be asked to join teams, which limited their sales. Also, the average account assets transferred to them as trainees for their first 28 months of employment were significantly less compared to white brokers.

Requiring Employees to Attend Programs That Might Be Offensive

Allstate Insurance has been the focus of several religious discrimination lawsuits brought by insurance agents. Some agents charged that the principles emphasized in training programs were based on Scientology and were offensive and counter to their religious beliefs. For example, the training program taught concepts such as the "tone scale" that catalogs emotions and that Scientologists believe can influence behavior.[29]

Revealing Discriminatory Information During a Training Session

At Lucky Stores, a California supermarket chain, notes taken during a diversity training program were used as evidence of discrimination.[30] In the training session, supervisors were asked to verbalize their stereotypes. Some comments ("Women cry more," "Black women are aggressive") were derogatory toward women and minorities. The plaintiff in the case used the notes as evidence that the company conducted the training session. To avoid an investigation by the EEOC, the case was settled out of court.

Not Making Accommodations for Trainees Religious Beliefs or Disabilities

As previously mentioned, Title VII of the Civil Rights Act of 1964 prohibits discrimination based on a religion. The **Americans with Disabilities Act (ADA)** prohibits individuals with disabilities from being discriminated against in the workplace. The ADA prohibits discrimination based on disability in employment practices, including hiring, firing, compensation, and training. The ADA defines a disability as a physical or mental impairment that substantially limits one or more major life activities, a record of having an impairment, or being regarded as having such an impairment. This includes serious disabilities such as epilepsy, blindness, or paralysis, as well as persons who have a history of heart disease, mental illness, or cancer that is currently in remission. Both Title VII and ADA require companies to provide "reasonable accommodations."

The ADA requires companies to provide "reasonable accommodation" to the physical or mental condition of a person with a disability who is otherwise qualified, unless doing so would impose an "undue hardship" on the organization's operations. Determination of undue hardship is made by analyzing the type and cost of the accommodation in relation to the company's financial resources. Even if the undue hardship can be justified, the ADA requires that the person with the disability be provided the option of paying the part of the cost that causes the undue hardship.

In the context of training and the ADA, **reasonable accommodation** refers to making training facilities readily accessible to and usable by individuals with disabilities. Reasonable accommodation may also include modifying instructional media, adjusting training policies, and providing trainees with readers or interpreters. Employers are not required to make reasonable accommodation if the person does not request them. Employers are also not required to make reasonable accommodation if persons are not qualified to participate in training programs (e.g., they lack the prerequisite certification or educational requirements).

Companies are also required to reasonably accommodate an employee's religious beliefs unless it would pose an undue hardship. Companies must accommodate an employee's religious beliefs, for example, by providing a schedule change, when it would cause no undue hardship. Frito-Lay has been charged with violating Title VII when it fired a newly promoted route sales representative because he could not train for the position on Saturdays due to his Seventh-day Adventist religious beliefs.[31] A Frito-Lay warehouse employee received a promotion to route sales representative. The employee completed approximately five weeks of training for his new position without having to train on Saturdays. However, despite learning he could not work on Saturdays because of his religious beliefs, Frito-Lay scheduled him to train on Saturdays and terminated his employment after he failed to report to training on two consecutive Saturdays.

The EEOC is pursuing a case against a company that owns and operates Popeye's restaurants in Indiana because it refused to complete the onboarding of an employee with a cognitive disability who was hired.[32] The restaurant was told in the interview that the job applicant would need a job coach present during training. It hired her and gave her paperwork and the employee handbook. Afterwards, however, the restaurant told the applicant's job coach it could not hire her because it was concerned she would injure herself while working at the restaurant due to her disability. The EEOC is seeking back pay, compensatory and punitive damages, and other relief from the company including a permanent injunction to prevent the company from engaging in future disability discrimination in hiring.

The ADA has implications for most training methods, including adventure learning and e-learning. Some adventure learning experiences demand a high level of physical fitness. Employees who have a disability cannot be required to attend adventure learning training programs.[33] If it does not cause an undue hardship, employees should be offered an alternative program for developing the learned capabilities emphasized in the adventure learning program. E-learning should be accessible to trainees with visual, hearing, mobility, and cognitive disabilities.[34] Section 508 of the Rehabilitation Act requires information and communication technology purchased by the federal government (including e-learning) to be accessible to individuals with disabilities. The ADA requires colleges and universities to make online content accessible to individuals with disabilities. Similarly, based on the ADA, several lawsuits have been filed against private sector companies by individuals who alleged that the companies' websites were inaccessible to those with disabilities. To make online learning accessible it needs to be perceivable (presented to trainees in ways they can recognize it), operable (trainees can navigate the online course), understandable (trainees can comprehend the content), and robust (training content can be interpreted by technologies that help trainees with disabilities, such as screen readers).

It is impossible to give specific guidelines regarding the type of accommodations that trainers and managers should make to avoid violating the ADA. It is important to identify if the training is related to "essential" job functions. That is, are the tasks (or knowledge, skills, and abilities) that are the focus of training fundamental to the position? Task analysis information (discussed in **Chapter Three**, "Needs Assessment") can be used to identify essential job functions. For example, tasks that are frequently performed and critical for successful job performance would be considered essential job functions. If training relates to a function that may be performed in the job but does not have to be performed by all persons (a marginal job function), then a disability in relation to that function cannot be used to exclude that person from training. To the extent that the disability makes it difficult for the person to receive the training necessary to complete essential job functions, the trainer must explore whether it is possible to make reasonable accommodations.

Incorrectly Reporting Training as an Expense, Failing to Report Training Reimbursement as Income, or Failing to Pay Employees for Attending Training

The cost of training is covered by the Internal Revenue Code. Companies can often deduct the cost of training provided to employees as a business expense. The Employer Assistance Program, part of the IRS Code, allows an employer to pay an employee up to $5,250 per year for certain educational expenses. This amount can be deducted by the employer as a business expense without adding the payment to the employee's yearly gross income. In other programs (e.g., the Educational Reimbursement Program), the employer can decide which training is paid for and how it is funded. Reimbursement for training expenses that an employee incurs may be considered part of the employee's taxable income. Employees may be able to deduct work-related educational expenses as itemized deductions on their income taxes. To be deductible, the expenses must be for training that maintains or improves skills required in the job or that serves a business purpose of the company and is required by the company, or by law or regulations, in order for employees to keep their present salary, status, or job. See www.irs.gov for more information about business and individual reporting of educational expenses.

The Fair Labor Standards Act requires employees to receive compensation for all hours worked. The time that employees spend in training should be considered working time, which means they should be paid unless the following four conditions are met:[35] (1) training is outside of the employee's regular working hours; (2) training is voluntary; (3) training is not directly related to the employee's job; and (4) the employee does not perform any productive work during training.

Managing Workforce Diversity and Ensuring Equity and Inclusion

Companies are using training and management practices to foster and capitalize on diversity, equity, and inclusion. Recall our discussion of diversity, equity, and inclusion in **Chapter One**. **Managing diversity, equity, and inclusion** involves creating an environment that allows all employees to contribute to organizational goals and experience personal growth. This environment includes access to jobs, as well as fair and positive treatment of all employees. The company must develop employees who are comfortable working with people from a wide variety of ethnic, racial, and religious backgrounds. Managing diversity may require changing the company culture. It includes the company's standards and norms about how employees are treated, competitiveness, results orientation, innovation, and risk taking. The value placed on diversity is grounded in the company culture.

Managing diversity and inclusion can provide companies with a competitive advantage in several different ways. It helps a company develop a reputation as a favorable employer, which attracts talented women and minority employees. Women and minority employees will feel valued and free to contribute their insights, which can help develop new products and improve marketing efforts focused on specific consumer segments such as Hispanics. Diversity may enhance performance when organizations have an environment that promotes learning from diversity.[36] Research shows that diversity does make a difference.[37] For example, diversity has been found to be positively related to sales revenue, number of customers, market share, and relative profits. There is a positive relationship between the proportion of women and ethnically or culturally diverse individuals in the leadership of large companies and financial performance. Also, companies that actively recruit and support talent from underrepresented groups are 70 percent more likely to capture new markets than organizations that do not.

Diversity training and unconscious bias training are important parts of managing diversity and inclusion, but alone they are insufficient to capitalize on the value of a diverse workforce.[38] **Diversity training** refers to learning efforts that are designed to change employee attitudes about diversity and/or develop skills needed to work with a diverse workforce. The goals of diversity training are (1) to eliminate values, stereotypes, and managerial practices that inhibit employees' personal development; and therefore (2) to allow employees to contribute to organizational goals regardless of their race, sexual orientation, gender, family status, religious orientation, or cultural background.[39]

Research shows that diversity training has the largest effect on understanding and awareness of diversity and significant but smaller effects on behavior and attitudes. The positive effects of diversity training are greater when it is part of a larger managing-diversity effort, focused on both awareness and skills development, and sufficient time is devoted to it.[40] Also, greater benefits are found for diversity training that uses training design features that create a positive learning environment. That is, the training program is of sufficient length for trainees to learn (four hours or more), managers are used as trainers, and trainees interact face to face with the instructor, the content, and other learners using cases and exercises. The most common area addressed through diversity training is the pervasiveness of stereotypes, assumptions, and biases.[41]

Unconscious bias is one specific type of bias that companies are addressing through training. **Unconscious bias** is a judgment outside of our consciousness that affects decisions based on background, culture, and personal experience. We are all subject to unconscious bias. For example, one way unconscious bias can affect us is through the attributions or reasons we use to explain performance. For example, compared to men, women receive two and one-half times more feedback about having an aggressive communication style. Also, men tend to receive more feedback linked to a business outcome than women. And it doesn't matter whether the manager conducting the performance evaluation is a man or a woman! Many companies recognizing the importance of reducing unconscious bias in performance evaluations and promotion decisions, and access to development programs are requiring employees to participate in unconscious bias training programs.[42] These training programs are designed to make employees aware of unconscious bias and reduce its impact by slowing down decision-making and carefully considering the reasoning and language used in judgements.

Consider Kaiser Permanente and Starbucks's efforts to curb the negative influence of unconscious bias.[43] Kaiser Permanente is training employees to help them recognize their own unconscious biases. The company is also working on implementing training for leaders in the company so they can mitigate how their biases might be impacting their decision-making and communication so they can ultimately change how they direct and talk to their departments. The training is part of Kaiser Permanente's larger effort to manage diversity and inclusion and create a work culture that emphasizes equity for all employees. Starbucks shut down all of its stores for a day to ensure all of its employees completed unconscious bias training as a result of an incident in which a white manager called police after two African American men arrived for a business meeting. The reaction of the manager who called the police was based more on stereotypes about Black men than on the reality of how they were behaving in the store. The training involved employees working in small groups completing a workbook and watching video and audio clips on an i-pad. Employees were prompted to find differences between themselves and others. They examined their own biases. They watched a video in which company chairman Howard Schultz talked about his vision for a more inclusive company and country. They reflected on what a place of belonging means to them. Each group viewed a documentary in which people of color talk about their experiences of being racially profiled, including being followed in stores, dragged off of planes, and threatened and attacked in restaurants. Also, employees listened to audio recordings from their peers describing times they acted on their biases. For example, one incident involved an employee moving a tip jar behind the counter when a group of young men walked into the store. Another incident involved an employee telling a man not to panhandle when he was actually standing in line with his wife. The questions in the workbook included asking employees to propose suggestions for corporate policy, to identify the obstacles they face in making all customers feel welcome, and what actions they plan to take to make their coworkers and customers feel welcome. To continue its focus on eliminating unconscious bias and championing diversity, Starbucks has offered additional training on building diverse teams, engaging with empathy, and mindful decision making.

To help further ensure that company culture supports diversity, equity, and inclusion, some companies are engaging in ally training. **Ally training** refers to training that encourages employees to have conversations about difficult topics and perspectives without fear of blame or shame.[44] Some ally training programs encourage white employees (or those who are in the majority) to support minority employees in the workplace by offering them support and speaking up for them when they experience unfair treatment. The goal of Microsoft's ally training is to provide employees with the language and skills they need to discuss different perspectives and difficult issues in a way that offers empathy and inclusion to all.[45] Through allyship training, Microsoft wants to encourage employees to talk to each other in order to learn how to offer support and help. To do so, Microsoft's training emphasizes that in conversations with others, it is best to speak from our own personal perspective rather than on behalf of others, listen and ask good questions, suspend judgment, separate behavior from the person and focus on the impact of the behavior on others, and see mistakes as an opportunity to learn rather than a reason to get defensive. The Microsoft Allyship Program consists of 10 parts. Employees can take online, self-paced classes, watch video scenarios with actors portraying and discussing various work situations, and participate in facilitated sessions focused on building skills and practicing behaviors. The program emphasizes that all employees can benefit from greater inclusion and everyone can be an ally and receive the benefits of allyship. Surveys conducted since the training started show that employees are feeling more safety and comfort in speaking up even when conversations are difficult. Ally training may be effective because it helps employees break down barriers based on demographics and instead shows that all employees share the similar need to be heard, respected, and supported.[46]

A company will see the success of its diversity efforts only if it makes a long-term commitment to managing diversity and has a zero tolerance policy toward discrimination. Successful diversity requires that it be viewed as an opportunity for all employees to (1) learn from each other how to better accomplish their work, (2) be provided with a supportive and cooperative organizational culture, and (3) be taught leadership and process skills that can facilitate effective team functioning. Diversity is a reality in labor and customer markets and is a social expectation and value. Managers should focus on building an organizational environment, HR practices, and managerial and team skills that capitalize on diversity. As you will see in the discussion that follows, managing diversity requires difficult cultural change, not just slogans on the wall or training.

Table 10.2 shows the characteristics associated with the long-term success of diversity programs. It is critical that a diversity program be tied to business objectives. Measuring the effectiveness of managing diversity helps ensure that it is given as much importance as other business outcomes such as productivity or customer satisfaction. Diversity and inclusion goals are included in managers' performance objectives and they are expected to be actively involved in promoting diversity. For example, Starbucks is linking executive pay to increasing minority representation in the workforce.[47] By 2025, Starbucks wants to have 30 percent of U.S. corporate employees and 40 percent of retail and manufacturing employees to be people of color. Currently, the company falls short of those goals in 9 of 14 job levels it intends to monitor progress. Starbucks has publicly committed to sharing data on their progress toward becoming a more diverse workforce. Starbucks is taking several other actions to demonstrate its commitment to diversity, inclusion, and equality. It is starting a mentorship program connecting Black, Indigenous and People of Color (BIPOC) partners to senior leaders. It is creating Inclusion and Diversity learning modules for U.S.-based partners and including anti-bias content into all hiring, development, and performance assessment tools. Starbucks will also provide grants and support to the communities they serve, especially BIPOC-run organizations and youth. Both Google and Facebook have acknowledged that Blacks and Latinx are underrepresented in leadership positions.[48] At Google and Facebook, about two-thirds of leadership positions are held by white employees, but less than 4 percent by Black or Latinx employees. As a result, both Google and Facebook are striving by 2025 to increase the leadership positions held by members of underrepresented groups by 30 percent. Both companies are planning to give millions of dollars to Black-owned businesses, suppliers, and content creators. Facebook plans to offer free digital skills training to Black and Hispanic students and to give 100,000 scholarships to Black students that they can use to pursue digital-skills certifications.

Top management support can be demonstrated by creating a structure to support the initiative. Consider Sodexo's diversity effort.[49] Sodexo is one of the leading food and facilities management companies in the United States, Canada, and Mexico, serving 10 million customers daily. With employees in 80 countries (representing 128 nationalities) connecting with customers on a daily basis, a policy of inclusion is not an option or a choice—it is a business necessity. Sodexo has publicly committed to improving five dimensions of diversity: gender, people with disabilities, generations (age), cultures and origins, and sexual orientation and gender identity. For Sodexo, achieving gender balance was the starting point. The company pledged to boost the number of senior female executives to 40 percent by 2025.

Diversity and inclusion are core elements of the business strategy. Sodexo believes that diversity and inclusion are fundamental business objectives focused on employees (e.g., work culture, recruitment, talent development, and work-life effectiveness), customers, clients, and shareholders (e.g., supplier diversity, cross-market diversity council, diversity consulting), and communities (e.g., Sodexo Foundation and Community Partners). For example, some of the objectives include understanding and living the business case for diversity and inclusion; increasing awareness of how diversity relates to business challenges; creating and fostering a diverse work environment by developing management practices that drive hiring, promotion, and retention of talent; engaging in relationship management and customer service to attract and retain diverse clients and customers; and partnering with women and minority businesses to deliver food and facility management services. Diversity and inclusion are core competencies at Sodexo. Diversity and inclusion are part of employees' training and managers' annual performance reviews; new employee orientation emphasizes Sodexo's values and expectations regarding diversity and inclusion.

Sodexo separates Equal Employment Opportunity (EEO) and legal compliance training from diversity training. At Sodexo, diversity training is part of the managing diversity strategy. Every three years, employees are required to take EEO and affirmative action refresher courses. Top management is also involved in and committed to managing diversity. The senior executives program includes ongoing classroom training that is reinforced with community involvement, sponsoring employee groups, and mentoring diverse employees. Executives are engaged in learning the business case for diversity and are personally held accountable for the

TABLE 10.2 Characteristics Associated with Diversity Programs' Long-Term Success

- Top management provides resources, personally intervenes, and publicly advocates diversity.
- The program is structured.
- Capitalizing on a diverse workforce is defined as a business objective.
- Capitalizing on a diverse workforce is seen as necessary to generate revenue and profits.
- The program is evaluated using metrics such as sales, retention, and promotion rates.
- Manager involvement is mandatory.
- The program is seen as a culture change, not a one-shot program.
- Managers and demographic groups are not blamed for problems.
- Behaviors and skills needed to successfully interact with others are taught.
- Managers are rewarded on progress toward meeting diversity goals.
- Management collects employee feedback and responds to it.
- Management creates a safe and open culture that all employees want to belong to, in which employees can discover and appreciate differences and where the benefits of diversity are recognized by all employees.
- Conduct an audit of the hiring, promotion, compensation, and leadership positions of women and people of color. Also, consider the diversity of the company's vendors and suppliers.

Sources: Based on R. Feintzeig, "Diversity Is a Higher Priority. Now What?" *The Wall Street Journal,* July 20, 2020, p. A13; T. Agovino, "Were Talking About Racism. We Never Talked About This Before," *HR Magazine,* Fall 2020, pp. 32–43; S. Cheng, A. Corrington, J. Dinh, M. Hebl, E. King, L. Ng, E. Reyes, E. Salas, and A. Traylor, "Challenging Diversity Training Myths," *Organizational Dynamics* 48(4) (2019); F. Dobbins and A. Kalev, "Why Diversity Programs Fail," *Harvard Business Review,* July–August 2016, pp. 52–60; B. Groysberg and K. Connolly, "Great Leaders Who Make the Mix Work," *Harvard Business Review,* September 2013, pp. 68–76; K. Bezrvkova, K. Jehn, and C. Spell, "Reviewing Diversity Training: Where We Have Been and Where We Should Go," *Academy of Management Learning and Education* 11 (2012), pp. 207–27; S. Rynes and B. Rosen, "A Field Survey of Factors Affecting the Adoption and Perceived Success of Diversity Training," *Personnel Psychology* 48 (1995), pp. 247–70; R. Anand and M. Winters, "A Retrospective View of Corporate Diversity Training from 1964 to the Present," *Academy of Management Learning and Education* 7 (2008), pp. 356–72; C. Chavez and J. Weisinger, "Beyond Diversity Training: A Social Infusion for Cultural Inclusion," *Human Resource Management* 47 (2008), pp. 331–50.

company's diversity agenda. The Cross-Market Diversity Council (CMDC) is comprised of managers and leaders who want to foster a more diverse and inclusive Sodexo. The objective of this group is to collaborate and operationalize the diversity plan within each business line; to serve as thought leaders to advance the diversity and inclusion strategy; and to implement diversity and inclusion at a regional level and align with its Employee Business Resource Groups.

The one-day Spirit of Inclusion session, mandatory for all managers, focuses on building awareness and skills around diversity and inclusion. Every manager takes an eight-hour introductory class (called Spirit of Diversity). Sodexo's diversity training involves learning labs focused on skill building and diversity awareness. Examples of these learning labs include Generations in the Workplace, Disability Awareness Training, Cross-Cultural Communications, and Improving Team Effectiveness Through Inclusion. The company's learning and development team develops customized learning solutions for different functions and work teams. For example, a course related to selling to a diverse client base was developed and offered to the sales force, and a cross-cultural communications program was provided for recruiters. Also, employees have access to on-demand learning, frontline huddles and virtual instructor-led courses, as well as classroom sessions. Sodexo's D&I curriculum includes offerings to address all dimensions of diversity. In 2019, more than 5,000 managers participated in D&I learning opportunities to improve the managing of workplace diversity.

In addition to diversity training activities, Sodexo has many employee network groups—such as the African American Leadership Forum, People Respecting Individuality, Diversity, and Equality (PRIDE), Honoring Our Nation's finest with Opportunity and Respect (HONOR), and the Intergenerational Network Group (IGEN). Each network group aligns with one of five priority areas: Cultures and origins, gender, disabilities, sexual orientation and gender identity, and generations. These network groups provide forums for helping employees feel a sense of community, learn from each other, develop their careers, and share input and ideas to support the company's diversity efforts. Sodexo's "Champions of Diversity" program rewards and recognizes employees who advance diversity and inclusion. Employees can recognize peers who demonstrate diversity and inclusion behaviors that help to attract and retain diverse talent or increase brand recognition in the community. Employees who receive this recognition are entered into a monthly raffle in which they can win $50 reward cards.

To emphasize the importance of diversity at Sodexo, each manager has a diversity scorecard that evaluates his or her success in recruitment, retention, promotion, and development of all employees. The scorecard includes both quantitative goals and evaluation of behaviors such as participating in training, mentoring, and community outreach. A proportion of their pay bonuses is determined by success in these areas.

Sodexo has found that its efforts to manage diversity are having a positive impact on business results and the movement of women to top level positions in the company. Women make up half of the executive board, 32 percent of senior leaders, and close to 50 percent of its total workforce. It is, notably, also among the most successful financially with value creation that is 13 percent above the industry average. Its mentoring program has led to increased productivity, engagement, and retention of women and people of color. It estimates a return on investment (ROI) of $19 for every $1 spent on the program. Sodexo has found that gender-balanced teams, those with 40 to 60 percent women in management, outperform nonbalanced teams on measures of engagement, brand awareness, client retention (12 percent increase), and profit and growth. Sodexo has been awarded several new business contracts and retained clients because of its involvement in managing diversity. The company also has been recognized for its diversity and inclusion efforts, which help attract talented employees by signaling that the company cares about the well-being of all of its employees. Sodexo continues to receive recognition for its efforts, earning a top ranking on the DiversityInc 2020 Top 50 Companies for Diversity list, marking its 12th year it has achieved this ranking. Sodexo is also recognized as a top company for executive women and is ranked among the top 10 companies for Latinos, Blacks, global diversity, and people with disabilities. Most programs that effectively manage diversity, such as Sodexo's diversity program, include the key components shown in **Table 10.3**.

TABLE 10.3 Key Components of Effectively Managed Diversity Programs

Top Management Support
- Make the business case for diversity.
- Include diversity as part of the business strategy and corporate goals.
- Participate in diversity programs, and encourage all managers to attend.
- Ensure that the composition of the executive management team mirrors the diversity of the workforce.

Recruitment and Hiring
- Ask search firms to identify wider arrays of candidates.
- Enhance the interviewing, selection, and hiring skills of managers.
- Expand college recruitment at historically minority colleges.

Talent Identification and Development
- Form a partnership with internship programs that target minority students for management careers.
- Establish a mentoring process.

- Refine the company's global succession planning system to improve identification of talent.
- Improve the selection and development of managers and leaders to help ensure that they are capable of maximizing team performance.
- Ensure that all employees, especially women and minorities, have access to management development and leadership programs.

Employee Support
- Form resource groups or employee network groups, including employees with common interests, and use them to help the company develop business goals and understand the issues they are concerned with (e.g., Asian Pacific employees, women, gays, lesbians, transgenders, Native Americans, veterans, Hispanics).
- Celebrate cultural traditions, festivities, and holidays.
- Make work-life balance initiatives (such as flextime, telecommuting, and elder care) available to all employees.

Fair Treatment
- Conduct extensive diversity, unconscious bias, and ally training.
- Implement an alternative dispute resolution process.
- Include women and minorities on all human resources committees throughout the company.

Manager Accountability
- Link managers' compensation to their success in meeting diversity goals and creating openness and inclusion in the workplace.
- Use employee attitude or engagement surveys to track employees' attitudes about issues such as inclusion, fairness, opportunities for development, work-life balance, and perceptions of the company culture.
- Implement 360-degree feedback for all managers and supervisors.

Relationships with External Stakeholders
- Increase marketing to diverse communities.
- Provide customer service in different languages.
- Broaden the company's base of suppliers and vendors to include businesses owned by minorities and women.
- Provide scholarships and educational and neighborhood grants to diverse communities and their members.

Sources: Based on B. Groysberg and K. Connolly, "Great Leaders Who Make the Mix Work," *Harvard Business Review,* September 2013, pp. 68–76; R. Anand and M. Winters, "A Retrospective View of Corporate Diversity Training from 1964 to the Present," *Academy of Management Learning and Education* 7 (2008), pp. 356–72; C. Chavez and J. Weisinger, "Beyond Diversity Training: A Social Infusion for Cultural Inclusion," *Human Resource Management* 47 (2008), pp. 331–50; "Diversity & Inclusion," Verizon's diversity program available at the company website, www.verizon.com, accessed April 13, 2015.

As should be apparent from this discussion, successful diversity programs involve more than just an effective training program. They require an ongoing process of culture change that includes top management support, as well as diversity policies and practices in the areas of recruitment and hiring, training and development, and administrative structures, such as conducting diversity surveys and evaluating managers' progress on diversity goals.[50] They also focus on enhancing diversity and inclusion with suppliers, vendors, and in the communities where the company conducts business.

Many companies furthered their commitment to diversity, equality, and inclusion following the death of George Floyd and the resulting Black Lives Matter protests. Consider the actions of Kimberly-Clark and Comcast Corporation.[51] Ten years ago Kimberly Clark made diversity, equity, and inclusion a strategic objective because it was the right thing to do both ethically and for the business. For example, Kimberly-Clark's customer base for its paper products, diapers, and feminine hygiene products is largely women so to keep their business, the company needs to provide them with quality products and show them it provides opportunities for women in the business. Recognizing the importance of race and social justice, Kimberly-Clark decided that it had to help employees have conversations about these issues. To do so, Kimberly-Clark first issued a statement expressing the company's obligation to help eliminate bias, discrimination, and injustices affecting its employees, consumers, and communities. Next, they developed a global virtual town hall on race and racism that was attended or watched by over 5,000 employees. Training sessions on understanding inclusion were held for the company's top 600 leaders. Also, conversations among small groups of employees on racism and bias were held. For managers, a virtual library of resources was provided. Comcast Corporation, the global media and technology company that includes Comcast Cable, NBCUniversal, and Sky, created a plan to allocate $100 million to fight injustice and inequality against any race, ethnicity, gender identity, sexual orientation, or ability. This included a commitment to educate all employees to better understand race-related issues and encourage them to have important yet uncomfortable conversations through Town Hall meetings, speaker series, and mandatory anti-racism and anti-bias training. Also, the company expanded its financial commitment and support for its employee resource groups. It pledged to provide further support organizations representing minorities, small businesses with minority owners, and expand free internet services to low-income areas. It also pledged to use its media resources to highlight Black voices and Black stories and educate its audience on diverse and inclusive cultures, perspectives, and experiences.

Melting the Glass Ceiling

A major development issue facing companies today is how to get women and minorities into upper-level management positions—how to break the glass ceiling. The **glass ceiling** refers to a barrier to advancement to higher-level jobs in the company that adversely affects women and minorities. Research shows that both Blacks and women are underrepresented in CEO positions and are often in roles that are not considered for promotion to CEO.[52] In the Fortune 100, Black executives only hold 3 percent of the positions that influence company success and are on the career path to the CEO position. Even when Black employees do become executives, they are often given positions with less advancement potential such as chief administrative executive. The data are similar for women. Only 25 percent of total C-suite positions in the Fortune 100 are held by women. Only 7 companies have a female CEO. Women hold only 13 percent of positions with high potential for CEO promotion and board recruitment (CEO, CFO, and P&L leaders). By contrast, they hold 38 percent of positions with lower potential for advancement (general counsel, human resources, chief risk officer, etc.).

One of the dilemmas is that companies may be reluctant to treat women and minorities any differently than men from a leadership development perspective, despite acknowledging that they lack executive sponsors or mentors, have insufficient experience, and need better work-life balance. This barrier may be due to stereotypes or company systems that adversely affect the development of women or minorities.[53] The glass ceiling is likely caused by lack of access to training programs, appropriate developmental job experiences, and developmental relationships (such as mentoring).[54] For example, Lisa Wardell, CEO of Adtalem, is one of only a few Black women to head a publicly traded company. Her path to a CEO position was helped by the profit and loss roles she received during her 12 years at the RJL Companies, a Black-owned company.[55] Ursla Burns, former CEO of Xerox Holding Corporation, and the first Black woman to run a Fortune 500 company, believes her career progress was aided by positions she had serving as an executive assistant to the company's executive vice president and the CEO. But 55 percent of women are in functional roles such as lawyers, chief of finance, or human resources, which may not put them in the career path needed to become a CEO. Women and minorities often have trouble finding mentors because of their lack of access to the "old-boy network"—managers' preference to interact with other managers of similar status rather than with line employees—and intentional exclusion by managers who have negative stereotypes about women's and minorities' abilities, motivation, and job preferences.[56] Research has found no gender differences in access to job experiences involving transitions or creating change.[57] However, male managers receive significantly more assignments involving high levels of responsibility (high stakes, managing business diversity, handling external pressure, etc.) than female managers of similar ability and managerial level. Also, female managers report experiencing more challenges due to lack of personal support (which makes it more difficult to cope with stress) and lack of appreciation for their contributions, compared to male managers. Career encouragement from peers and senior managers does help women advance to higher management levels.[58] Managers making developmental assignments need to carefully consider whether gender biases or stereotypes are influencing the types of assignments given to women versus men.

Table 10.4 provides recommendations for melting the glass ceiling and helping retain talented women. Several companies have put these recommendations into practice.[59] Kimley-Horn, a planning and engineering design firm, created a development program to help female engineers prepare to transition from being a team member to a team leader. The program was created to help retain female engineers who were leaving after four to eight years with the company. The program includes workshops that occur about four months apart. The company holds the workshops approximately every two years. Participants in the workshops include women from across the company to aid in networking. Senior female leaders also attend the workshop to share their career stories, answer questions, and serve as mentors. The workshops include discussions about the challenges women face and how to overcome them. The female engineers also are coached on skills such as self-promotion, creating their personal brand, and having conversations with clients. Time is also spent helping the women identify their professional goals and a plan to attain them. Kimley-Horn has found that the women who participate in the program bring in more engineering projects and their retention rate is similar to male engineers.

TABLE 10.4 Recommendations for Melting the Glass Ceiling

- Make sure senior management supports and is involved in the program.
- Make a business case for change.
- Make the change public.
- Gather data on problems that cause the glass ceiling, using task forces, focus groups, and questionnaires.
- Create awareness of how gender attitudes affect the work environment.
- Force accountability through reviews of promotion rates and assignment decisions through stretch assignments, mentoring, and networking.
- Promote development for all employees.
- Support work-life balance and continue to offer employees development opportunities after they return from sabbaticals and parental leave.

Sources: Based on B. Groysberg and K. Connolly, "Great Leaders Who Make the Mix Work," *Harvard Business Review,* September 2013, pp. 68–76; D. McCracken, "Winning the Talent War for Women," *Harvard Business Review,* November–December 2000, pp. 159–67.

At Plante Moran, the accounting firm, the Women in Leadership (WIL) initiative's mission is to increase female leaders' visibility and provide targeted development opportunities to retain and advance women leaders across the firm. The effort's core components are an 18-month mentoring program and an annual WIL conference. The mentoring program partners high-potential female staff with partner mentors who work in different disciplines. The exposure to different aspects of the business provides mentees with a better understanding of the firm's offerings and clients, which prepares them for new leadership opportunities. The WIL conference is a female-only training and networking event featuring speakers and panels on leadership-related topics. The WIL initiative is yielding positive results. Since the mentoring program started, nearly all the women promoted to firm partner roles have been participants in the WIL program, and today two members of the firm's seven-member leadership team are women.

The Hershey Company's CEO Michele Buck and her executive team review the company's top 70 positions five times a year. They assign important assignments to talented employees in those positions and the high potentials employees in positions below them, making sure talented employees regardless of gender or race receive exposure and development. At Bank of America, sponsors play a key role in helping women advance to higher level positions. Not every women gets a sponsor. To get a sponsor, the women need to consistently perform, have a strong personal brand, and deliver results. Women who meet these qualifications can find a sponsor by participating in the company's formal career development program or through attending regular meetings it organizes with top company executives. At Bank of America, more than 40 percent of the management team are women. To ensure that the company continues to make progress in developing women and providing advancement opportunities for them, each month senior executives review scorecards showing the representation of women at each management level.

Cross-Cultural Preparation

As we mentioned in **Chapter One**, companies today are challenged to expand globally. Because of the increase in global operations, employees often work outside their country of origin or work with employees from other countries. An **expatriate** works in a country other than his or her country of origin. The most frequently selected locations for long-term expatriate assignments include the United States, China, Germany, United Kingdom, and France.[60] Many U.S. companies use expatriate assignments as a training tool. Through cross-cultural assignments, expatriates can acquire knowledge and skills, build their professional network, gain economically by earning a higher salary, and stimulate creativity and innovation.[61] But expatriate assignments pose challenges related to visa and travel constraints, noncompete clauses, social attachment, emotional and family concerns, and living and travel costs. For expatriates assignments to be successful, companies have to help employees manage these challenges through cross-cultural preparation.

Steps in Cross-Cultural Preparation

To prepare employees for cross-cultural assignments, companies need to provide cross-cultural preparation. **Cross-cultural preparation** educates employees (expatriates) and their families who are to be sent to a foreign country. To successfully conduct business in the global marketplace, employees must understand the business practices and the cultural norms of different countries.

To succeed overseas, expatriates need to be:

1. Competent in their areas of expertise.
2. Able to communicate verbally and nonverbally in the host country.
3. Flexible, tolerant of ambiguity, and sensitive to cultural differences.
4. Motivated to succeed, able to enjoy the challenge of working in other countries, and willing to learn about the host country's culture, language, and customs.
5. Supported by their families.[62]

One reason expatriates fail is that companies place more emphasis on developing employees' technical skills than on preparing them to work within other cultures. Research suggests that the comfort of an expatriate's spouse and family is the most important determinant of whether the employee will complete the assignment.[63] Studies have also found that personality characteristics are related to expatriates' desire to terminate the assignment and performance in the assignment.[64] Expatriates who are extroverted (outgoing), agreeable (cooperative and tolerant), and conscientious (dependable, achievement-oriented) are more likely to want to stay with the assignment and perform well. This suggests that cross-cultural preparation may be effective only when expatriates' personalities predispose them to be successful in assignments in other cultures.

The key to a successful foreign assignment is a combination of training and career management for the employee and family. Cross-cultural preparation involves three phases: predeparture, on-site, and repatriation (preparing to return home).

Predeparture Phase

Before departure, employees need to receive language training and training focused on the new country's culture and customs.[65] English is the common language at many multinational companies. But failing to speak the native language can cause employees to risk being misinterpreted or fail to understand informal conversations. Speaking and understanding the local language can help employees avoid misunderstandings and gain greater respect from business partners, subordinates, and customers. For example, Campari Group, the beverage company known for its adult beverages including Grand Marnier, Skyy Vodka, and Wild Turkey, has 4,000 employees around the world.[66] Although the English language is often the choice when communicating with clients and other employees from different countries, speaking it is a challenge for those for whom it is not their native language. As a result, Campari hired a training company to develop an English language program that includes self-paced lessons and virtual classes that are customized to the types of business conversations employees are likely to experience in their work. The language program includes content on current events and trends, which keeps learners interested in understanding it. It also provides learners with the opportunity to gain exposure to common expressions and causal conversational terms that are often used by native English speaking employees and clients.

Also, it is critical that the family be included in orientation programs.[67] Expatriates and their families need information about housing, schools, recreation, shopping, and health-care facilities in the areas where they will live. Expatriates also must discuss with their managers how the foreign assignment fits into their career plans and what types of positions they can expect upon their return.

Cross-cultural training methods include presentational techniques, such as lectures that expatriates and their families attend on the customs and culture of the host country, e-learning, immersion experiences, or actual experiences in the home country in culturally diverse communities.[68]

Consider how Iberdrola USA, Boeing, Qualcomm, and L'Oréal prepare employees and their families for cross-cultural assignments.[69] Iberdrola USA, a global company with 5,000 U.S. employees, is in the electricity transmission and generation business. Iberdrola sends U.S. employees to work at its locations in Mexico, Scotland, Brazil, and Britain and other European Union countries. Also, it brings employees to the United States to work for two to three years. To prepare employees for international assignments, Iberdrola pays training consultants $1,500 to $3,000 per day to teach employees language and cultural basics, such as understanding preferences for personal space. The company also has an exchange program in which children of U.S. employees temporarily stay with host families overseas and vice versa. At Boeing, the aerospace company with employees in 28 countries, employees and their families going on an international assignment are provided with one-on-one cultural sensitivity training and orientation. Boeing also provides "lunch and learn" cultural talks and rotation programs that allow overseas staff to work up to nine months in the United States.

For companies with a global presence, developing global leaders who can be effective with employees from different cultures and countries is essential to their success. Qualcomm, the semiconductor and telecommunications company, helps leaders prepare for global assignments by matching them with a mentor who has expertise about the country where the job is located. L'Oréal, known for its cosmetics, asks its leaders to complete a cultural assessment that gives them information about how their leadership style would be seen in different countries. L'Oréal uses this assessment to provide experiential-based learning, such as overseas assignments and serving on a project team including members from around the world.

Research suggests that the degree of difference between the United States and the host country (cultural novelty), the amount of interaction with host country citizens and host nationals (interaction), and the familiarity with new job tasks and the work environment (job novelty) all influence the "rigor" of the cross-cultural training method used.[70] Hands-on and group-building methods are most effective (and most needed) in assignments with a high level of cultural and job novelty that require a good deal of interpersonal interaction with host nationals.

On-Site Phase

On-site training involves continued orientation to the host country and its customs and cultures through formal programs or through a mentoring relationship. Expatriates and their families may be paired with an employee from the host country, who helps them understand the new, unfamiliar work environment and community.[71] Additionally, expatriates should be encouraged to develop social relationships both inside and outside the workplace.[72] Companies are also using websites and social media to help employees on expatriate assignments get answers to questions such as, "How do I conduct a meeting here?" or "What religious or business philosophy might have influenced today's negotiation behavior?"[73] Companies also are using websites and social media to help employees who are not expatriates but who interact with clients around the world or who work on cross-cultural teams requiring limited travel. IBM uses social networking tools to connect its employees around the world. IBM's site, known as w3, contributes to the global integration of the company. The w3 On Demand Workplace is a powerful productivity and collaboration tool for 400,000 IBM employees in 75 countries. The w3 can be used by employees to find resources and knowledge from peers around the world to help clients innovate and succeed. Employees can create personal profiles, bookmark websites and stories they are interested in, comment on company blogs, contribute to wikis, share files, and read and review position papers, videos, and podcasts.

A major reason that employees refuse expatriate assignments is that they can't afford to lose their spouse's income or are concerned that their spouse's career could be derailed by being out of the workforce for a few years.[74] To avoid these problems companies are introducing more flexible expatriate assignments. This can include reducing the amount of time on the assignment, commuting between the parent country and host country assignment, and rotational assignments in which employees alternate between working abroad and living back home.[75] Also, to help reduce the stress expatriate assignments can place on spouses and families, companies are supporting more frequent family visits to the expatriate in their host country and expatriate visits back home. A Cypriot working at the World Bank in Washington, D.C. does several things to stay connected to home.[76] She and her children visit frequently. She pays for satellite television so that her children can relate to Cypriot pop culture so they share a common bond with their friends. She also employs a nanny who speaks Greek and lives in an area where there is a strong Greek and Cypriot community.

Repatriation Phase

Repatriation prepares expatriates for return to the parent company and home country from the foreign assignment. Expatriates and their families are likely to experience high levels of stress and anxiety when they return because of changes that have occurred since their departure. Employees should be encouraged to self-manage the repatriation process.[77] Before they go on the assignment, they need to consider what skills they want to develop and the types of jobs that might be available in the company for an employee with those skills. Because the company may change and colleagues, peers, and managers may leave while the expatriate is on assignment, they need to maintain contact with key company and industry contacts. Otherwise, on return, their reentry shock will be heightened when they have to deal with new colleagues, a new job, and a company culture that may have changed. This includes providing expatriates with company newsletters and community newspapers and ensuring that they receive personal and work-related mail from the United States while they are on foreign assignment. It is also not uncommon for employees and their families to have to readjust to a lower standard of living in the United States than they had in the foreign country, where they may have enjoyed maid service, a limousine, private schools, and clubs. Salary and other compensation arrangements should be worked out well before employees return from overseas assignments.

Aside from reentry shock, many expatriates decide to leave the company because the assignments they are given upon returning to the United States have less responsibility, challenge, and status than their foreign assignments.[78] As noted earlier, career planning discussions need to be held before the employees leave the United States to ensure that they understand the positions they will be eligible for upon repatriation. For example, after completing five overseas assignments in operations and human resources positions in Indonesia and China, a manager for Walmart left the company because he missed the responsibility and authority he had in these assignments.[79] He could not find a similar position with Walmart when he completed his last international assignment. As a result, he took a job at Kimberly-Clark's international division as vice president of human resources.

Consider how Deloitte, Monsanto Company, Asurion, and L'Oréal help employees with repatriation.[80] To make the repatriation process back to the United States easier for employees and their families, Deloitte provides checklists and videos that discuss responsibilities at each stage of the process. These resources are available on Deloitte's intranet and accessible anywhere around the world using a smartphone or computer. Expats have designated mentors as well as global mobility advisers who can offer advice by phone or videoconference. Deloitte addresses potential problems that expats may feel about their skills and experience being underutilized in their job when they return home by having managers and employees discuss their expectations before and during the overseas assignment. These conversations include discussions about potential career paths. Monsanto identifies potential return positions before employees even begin their overseas assignment. Asurion, the phone, electronics, and appliance insurer, assigns expatriates to higher level managers who are responsible for finding them a new position when they return. To help expatriates integrate back into the company and feel welcome when they return home, L'Oréal invites them to attend orientation and socialization programs as if they were new employees. This is especially important for expatriates on long assignments who are likely not familiar with changes in processes, products, and services and for new employees.

Career Challenges Facing the Workforce

Employees' careers involve four stages: exploration, establishment, maintenance, and decline.[81] In the exploration stage, employees attempt to identify the type of work that interests them. They consider their interests, values, and work preferences and begin pursuing the type of education and training they need. The establishment stage involves finding employment, making an independent contribution, achieving more responsibility and financial success, and establishing a suitable lifestyle. In the maintenance stage, individuals are concerned with keeping their skills up to date and being perceived as someone who is still contributing to the company. They have many years of experience, much job knowledge, and an in-depth understanding of how business is conducted. The last stage, decline, involves individuals preparing to phase out of work and retire. Although individuals can go through these stages in a linear fashion and at certain ages (e.g., exploration typically occurs before age 30), most individuals do not because today's careers are boundaryless and often change.[82] This means that careers may involve identifying more with the profession than with the present employer, resulting in job changes. Also, at different times in their lives, individuals reconsider their interests, values, and how to best use their skills, resulting in one or more career changes.

To attract, motivate, and retain a talented workforce, companies need to understand and manage career challenges and help employees deal with career issues. These career challenges and issues include helping employees balance work-life needs; providing career ladders, career recycling, and job hopping; helping employees cope with career breaks and job loss; and meeting the needs of older employees, including retirement. These career challenges and issues are discussed next.

Work-Life Balance

Maintaining a healthy work-life balance is a concern for all employees, regardless of whether they have families, significant others, or dependents. It is difficult for many employees to maintain work-life balance due to long work hours, night-shift work, and travel, in addition to being tethered to smartphones, notebook computers, and smartwatches that bombard them on a 24/7 basis with work demands and family member requests. One study found that 67 percent of employers think their employees have work-life balance, but 45 percent of employees feel they don't have enough time each week for personal, social, and recreational activities.[83] **Work-life balance** refers to helping employees deal with the stresses, strains, and conflicts related to trying to balance work and nonwork demands. Work-life conflict has been found to be related to increased health risks, decreased productivity, tardiness, turnover, and poor mental health.[84] Work-life conflict occurs due to competing time demands and the stress of work and life roles. Work-life conflict also can arise when there is a conflict between an employee's behavior in her work role (such as when a manager is expected to be logical and impartial) and her nonwork role (she is expected to be warm, emotional, and friendly with family members and friends).

Social legislation has been approved to help employees balance work and family. The **Family and Medical Leave Act (FMLA)** is a federal law that provides up to 12 weeks of unpaid leave in a one-year period for parents with new infants or newly adopted children.[85] The FMLA also covers employees who must take a leave of absence from work to care for a family member who is ill or to deal with their own personal illness. Employees can also take 26 workweeks of leave during a single 12-month period to care for a service member with a serious injury or illness if the eligible employee is the service member's spouse, son, daughter, parent, or next of kin (military caregiver leave). Companies are required to provide employees with health-care benefits during their leave of absence.

It is important to realize that the FMLA doesn't apply to all employers or workers. Many part-time workers are not eligible and small businesses with fewer than 50 employees are not covered. The United States is the only developed nation in the world that does not provide for paid parental leave. If they have short-term disability benefits from their employer, parents can use these benefits to take time off. Some, but not all, employers cover all or part of parents' wages during their leave, even though they are not required to do so.

The COVID-19 pandemic had a major impact on work-life balance and employees' mental and physical health.[86] For example, the pandemic resulted in many employees scrambling to find a space and technology that would allow them to work from home and some employees' hours were reduced or they were furloughed. Factories experienced high absenteeism rates because employees had to stay home to care for their children or would rather risk losing their job than contracting COVID-19 or passing it to their friends and family members. Schools and childcare facilities were closed and children of school age attended school online from home. As a result, the pandemic created more anxiety, depression, and concern for the future than many employees typically experience.

To help employees cope with the pandemic yet remain productive, companies have expanded the types of work-life benefits they provide and many expect to continue to provide them after the pandemic is over.[87] Some companies are providing benefits required by the Families First Coronavirus Response Act (FFCRA) even though they are not required to do so. The FFCRA had two major provisions. One of the provisions required private employers with fewer than 500 employees and some public employers to pay sick leave of up to 80 hours, or roughly 10 days, to employees who need to take leave for certain coronavirus-related reasons. Under another provision, employees were eligible for an additional 10 weeks of family leave paid at two-thirds of their regular wages to care for a child whose school or place of care was closed or whose child care provider was unavailable because of COVID-19.

For example, Facebook expanded their child care benefits and expects to continue to offer them. Since some of its workforce likely will remain working remotely after the pandemic, Facebook started providing home office design consultations for employees that provide advice on optimal furniture set up and paint colors. To reduce absenteeism rates and increase employees' productivity, Toyota Motor Corporation provides a virtual learning center at its car plant in Kentucky. The learning center, run by Bright Horizons Family Solutions, Inc., has laptops for children to use to attend online school and provides teachers to answer questions and oversee their activities. Cleo Labs, a company that provides family-benefits to its clients, offers help for children up to 12 years old and includes sessions with therapists, social workers, and child development experts. Both Pinterest and Salesforce.com recently became clients and are offering these benefits to their employees.

To help employees better balance work-life needs and stay mentally and physically healthy, numerous companies have made time off mandatory and provided extended holiday vacations.[88] For example, Playground Global, a venture capital firm, has a one-week holiday approximately every three months. Once business returns to normal after the pandemic, the company plans to ask employees if they want to keep the mandatory time off or go back to a more traditional schedule for time-off. Plaid, a financial data provider, doubled the holidays offered during the pandemic. It gives employees Thursdays and Fridays off, offers free career-coaching and therapy sessions, and provides employee support groups. Plaid plans to continue offering these benefits to help employees reenergize and reduce their stress. To help employees listen for, recognize, and respond to signs of mental health and substance abuse issues, Starbucks is providing mental health training. The training includes four 30-minute modules covering effective listening, providing encouragement and reassurance, providing resources and information, and discussing the importance of self-care. The mental health training was especially useful during the pandemic to help employees cope with their fears and stress.

Also, to boost employees' engagement and ensure employees' well-being, managers at many companies such as Hewlett Packard Enterprise Company have been encouraged to personally contact employees using web conferencing tools such as Zoom to ensure their workload is not too burdensome and check-in on their well-being. To avoid employee burnout at ticketing company Everbright, managers monitor and follow-up with employees who are working after hours to encourage them to discontinue doing so unless absolutely necessary. Accenture PLC provides virtual training on how to support peers facing mental health challenges. McKinstry Company LLC, a construction and engineering company, sends out weekly memos emphasizing positive events that have occurred such as receiving feedback from a satisfied customer.

Men are often reluctant to take advantage of the FMLA or work-life balance programs for fear that they will dead-end their careers or that using available parental benefits would be seen by managers as a lack of job commitment. To avoid these fears, several companies are providing and supporting programs specifically targeted at fathers.[89] For example, Cisco Systems offers a minimum of 13 weeks paid parental leave for primary caregivers regardless of their gender. This has resulted in the average time that men take off from work from two to almost six weeks. Cisco provides coaching to these employees' managers about how to cover the work while they are on leave. Netflix offers unlimited paid family leave at full pay for new birth or adoptive parents. Twitter provides "Dads Lunches" four times each year to encourage men to take the 20 weeks of paid leave the company offers and to exchange parenting tips. American Express, the credit card company, sponsors support chats for new or expecting fathers where talk focuses on preparing for and returning from paternity leave and the 20 weeks of parental leave offered for both men and women. American Express found that the number of men taking paternity leave increased 10 percent due to its efforts. Legg Mason, an asset management company, changed its parental leave policy to give all new parents equal time off to help create more equality in its workforce. All over 700 U.S. new birth or adoptive employees will receive 12 weeks of pay regardless of whether or not the employee has a stay-at-home partner. Previously, the company provided 12 weeks of leave only to the primary caregiver and two weeks for a secondary caregiver.

Many companies have gone beyond relying on the FMLA to help employees balance work and family life. Work-family programs include paid/unpaid elder care leave, flexible spending accounts for dependent care, elder care resources and referrals, flexible spending accounts for elder care, and on-site child care. Research has found that employees working at companies that offer these programs believe that the organization supports their family and this leads to more positive job attitudes and better job performance.[90] Also, employees who use work-family programs have less work-family conflict than employees who do not. Additionally, companies are recognizing the benefits that can be gained by providing all employees, regardless of whether they have a spouse, children, or elders, with work-life balance through flexible work schedules, protecting their free time, and more productively using work time.[91] The benefits include attracting and retaining talented employees and reducing stress, which results in healthier employees and a rested workforce that can maximize the use of its skills. As a result, typically companies provide programs and practices that assist employees in coping with both family and broader non-work-life demands. **Table 10.5** shows examples of work-life balance practices.

TABLE 10.5 **Examples of Work-Life Balance Practices**

- Flexible work schedules
- Job sharing
- Child care
- Elder care
- Personal leave
- Telecommuting
- Reduced meeting times
- Reduced work hours
- Adoption support
- Paid vacation time
- Personal services (supplying meals, purchasing gifts, arranging home and auto services)
- Mental health services
- Bring pets to work
- Onsite virtual classrooms

Telecommuting refers to a work arrangement that gives employees flexibility in terms of both hours and where they work. The pandemic forced employees to work remotely. But some companies are considering continuing to allow employees to work remotely after the pandemic is over. For example, Salesforce.com Inc. plans for most of its employees to work remotely full- or part-time and change offices to increase spaces for collaboration with an emphasis on clean desks and social distancing.[92] The company expects more than 65 percent of its employees to come in the office one to three days a weeks compared to 40 percent before the pandemic. Both Twitter and Facebook plan to have most, if not all, of their employees work remotely. At Deutsche Bank AG, U.S. sales and trading employees have been returning to their New York headquarters offices, but the company is allowing them to work from home two or three days each week after the pandemic is over.[93]

A **compressed workweek** refers to a work schedule that allows employees to work fewer days but with longer hours, for example, four days, 10 hours each day. Consider these examples of a compressed workweek.[94] Employees at Argon Industries, a metal fabricator, allowed employees to shift to working three 12-hour days during the weekend so they could take care of their children who were home as a result of the pandemic. At Rheingans Digital Enabler, a technology consulting company with 16 employees, the CEO reduced the workday from eight to five hours but kept salaries and vacation time the same. Employees start work at 8 a.m. and may leave at 1 p.m. The ideas is for employees to avoid distractions while they are working such as unnecessary meetings or phone calls or constantly checking e-mail. Employees do feel more pressure to produce the same amount of work in less time, but it has given them more time to pursue hobbies. The shorter workday has not had a negative influence on productivity and has helped attract new employees.

Job sharing refers to having two employees divide the hours, the responsibilities, and the benefits of a full-time job. Companies may also use two job-sharing employees to fill one full-time position.[95] For example, two senior engineers at Ford help run global product development.[96] They each work four days 36 hours a week. They both are in the office Tuesdays through Thursdays, and each earn full benefits and 90 percent of the position's full-time salary. Both the company and the job sharers benefit from the arrangement. Job sharing gives the engineers a flexible schedule and Ford benefits by having them work on a broader range of assignments and increases the likelihood they will stay with the company.

Flextime refers to giving employees the option of choosing when to work during the workday, workweek, or work year. Flexible work arrangements focused on the workweek usually give employees the choice as to how they want to arrange their start and ending time, so long as they work a total of eight hours each day. They also require employees to work during certain core hours (such as 9 a.m. to 3 p.m.).

There are three challenges with the use of work-life balance policies. The first challenge is to use them to help employees achieve work-life balance without hurting business needs. The second challenge involved is that managers need to encourage and support, but not punish, employees who use work-life balance policies.[97] Employees' performance and development should be based on what they accomplish and how they do it, not whether they are seen around the office or put in "face time" with their manager. The third challenge is to ensure that work-life balance practices are accessible to everyone and meet the needs of all employees, not just those with families.

Career Paths and Dual Career Paths

A **career path** is a sequence of job positions involving similar types of work and skills that employees move through in the company.[98] Career paths help companies offer career options to their employees that help them make job choices that best fit their life situations. Providing career paths and making sure employees understand them is especially important because lack of career opportunities ranks after pay as the major reason employees leave companies. One survey showed that less than 50 percent of employees believe their organization provides useful career planning tools and opportunities to advance their careers.[99] Also, career paths help companies build employees' skills through a series of jobs or roles. This maximizes their value to the company and shows employees that they don't have to leave the company to move to new positions with different responsibilities and skill requirements.

Allergan, a global pharmaceutical company, took several actions to help their employees better understand the career paths available to them.[100] Allergen recognized that there is no one career path to success. As a result, the company realized it was not appropriate to develop career paths based on mapping careers based on defined moves from one job to the next. Instead, Allergen designed a career path planning tool based on skills that employees need to move to other positions rather than defining specific career paths for each position. Defining skills and linking them to different positions provides employees with a clear idea of what opportunities are currently available to them as well as help identify new skills they need. That way, employees and managers can discuss training and development opportunities they need to move to different positions. The tool allows employees to take more ownership of their careers and shows them options that perhaps they had not considered. The company also decided to align compensation to skills rather than positions. This helps encourage employees to pursue lateral or even downward moves to help them develop their skills without affecting their pay.

Figure 10.1 shows examples of vertical, horizontal, and cross-functional career paths at Whirlpool. Moving along the vertical career path requires an employee to be promoted to new jobs, which require taking on managerial responsibilities. The horizontal career path shows that an employee can move from Key Account Manager to jobs that differ because they focus on a category or a product but have similar managerial respon-

FIGURE 10.1 Examples of Career Paths at Whirlpool

Vertical Career Path

Category Marketing Director
(Directs, plans, and evaluates the marketing activities of several products or product lines)

↑

Category Senior Manager
(Manages the planning and direction of all marketing programs for a specific product and product line)

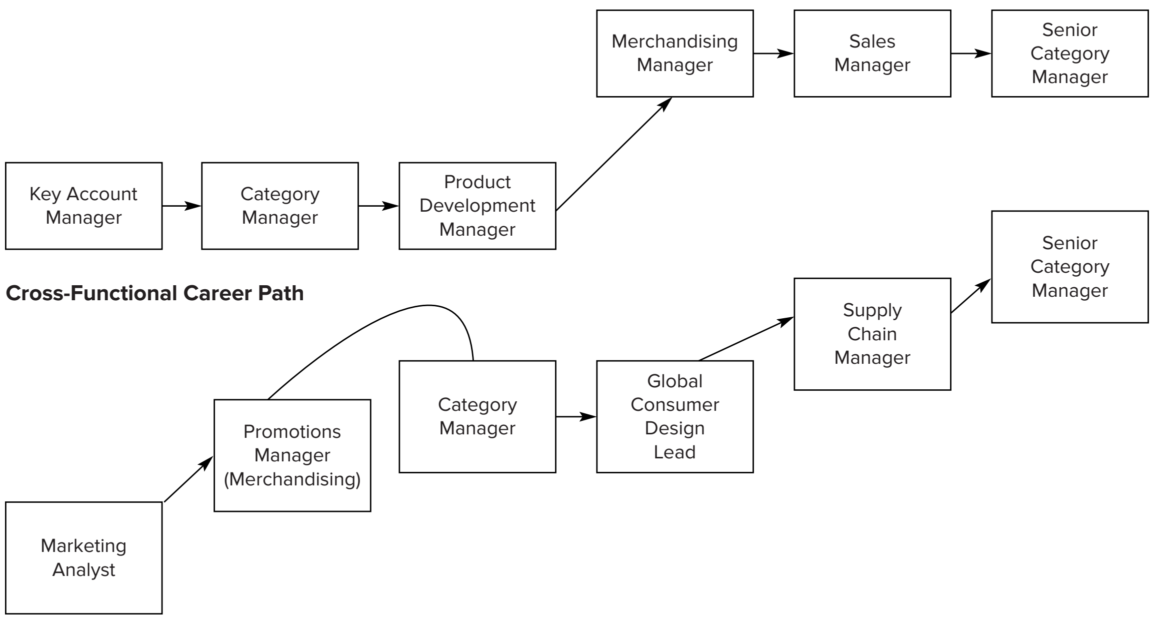
↑

Category Manager
(Assists in the development, execution, and tracking of marketing programs for a specific product or program line by collecting, analyzing, and reporting marketing data)

↑

Category Marketing Analyst
(Conducts marketing under supervision; audits data, performs gap analysis, and proofs creative products)

Horizontal Career Path



Source: Based on "Mapping Out Your Career," from http://us.whirlpoolcareers.com, accessed April 14, 2015.

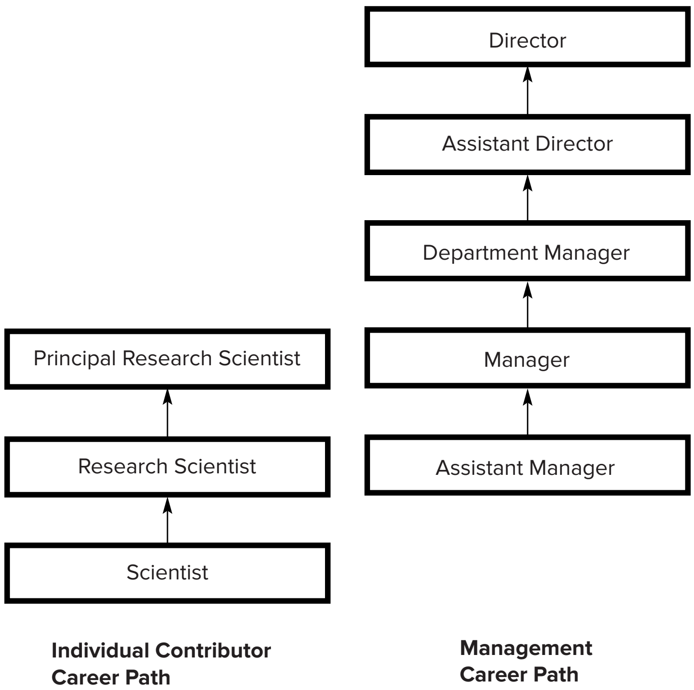
sibilities. From Product Development the employee needs to be promoted into the Merchandising Manager role, which requires additional responsibilities such as developing plans and strategies. The cross-functional career path involves moving from a Marketing Analyst job to a Promotions Manager role in a specific function (e.g., merchandising). From that job an employee can move into a Category Manager job and Global Consumer Design Lead position. Then, the employee can again move cross-functionally to a job as a Supply Chain Manager.

Developing career paths involves analyzing work and information flows, providing important development experiences, analyzing qualifications, the types of tasks performed across jobs, and similarities and differences in working environments, and examining the historical movement patterns of employees into and out of jobs (i.e., what positions company employees come from and what positions they move into when they leave a job).[101]

Dual Career Path

For companies with professional employees such as engineers and scientists, an important issue is how to ensure that they feel valued. Many companies' career paths are structured so that the only way engineers and scientists (individual contributors) can advance and receive certain financial rewards (such as stock options) is by moving into managerial positions. **Figure 10.2** shows examples of traditional career paths for scientists and managers. Advancement opportunities within a technical career path are limited. Individual contributors who move directly into management may lack the experience and/or competencies needed to be successful. Managerial career paths may be more highly compensated than technical career paths. A career path system such as the one in **Figure 10.2** can have negative consequences for the company. Scientists may elect to leave the company because they have lower status, less salary, and fewer advancement opportunities than managers

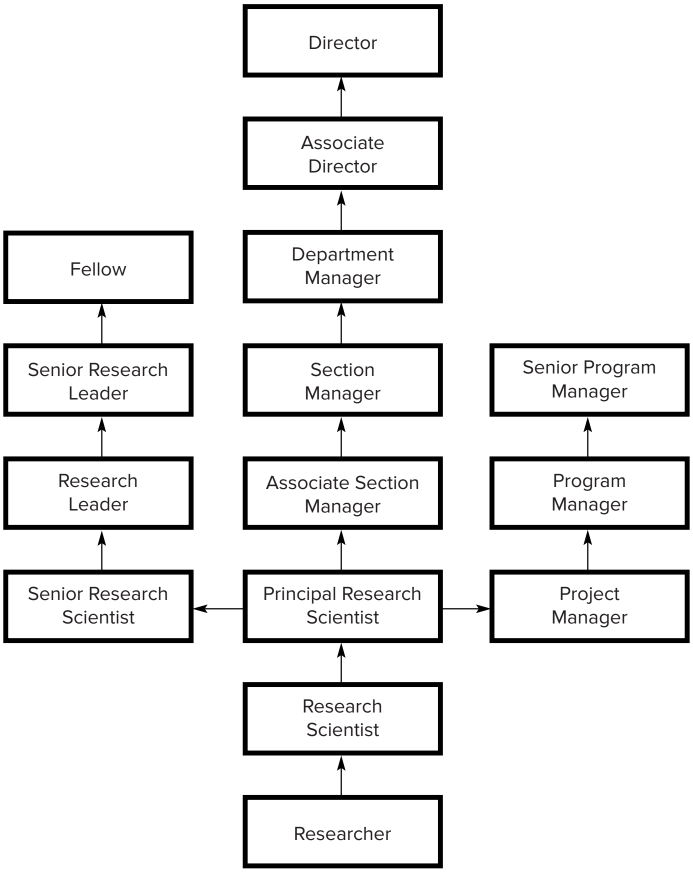
FIGURE 10.2 Traditional Career Paths for Scientists and Managers



enjoy. Also, if scientists want to gain status and additional salary, they must choose to become managers. Scientists who cannot meet the challenges of a managerial position may leave the company. For example, the National Weather Service has changed its career path for meterologists.[102] The previous career path gave them the opportunity to move up the career ladder based on their tenure at a given pay level. This did not consider their performance to figure into how quickly they move up. It also did not help ensure that they gained exposure to the different elements of forecasting before they were asked to manage others. The new career path removes the Meteorologist Intern and General Forecaster positions and creates a single Meteorologist career-track with promotion potential. The new career path is paired with a competency model that is supported by both training and work experience including web-based modules, live and recorded webinars, simulations, forecast challenges, seasonal readiness training, and on-the-job experience. Managers will work with employees at all levels to use the competency model and perform the training and on-the-job actions necessary to demonstrate competencies needed to progress in their careers.

Many companies are using multiple- or dual-career-path systems to give additional career opportunities to scientists and other individual contributors such as salespersons. A **dual-career-path system** enables employees to remain in a technical or sales career path or move into a management career path.[103] **Figure 10.3**

FIGURE 10.3 **Example of a Dual-Career-Path System**



Source: Z. B. Leibowitz, B. L. Kaye, and C. Farren, "Multiple Career Paths," *Training and Development Journal,* October 1992, pp. 31–35.

shows a dual-career-path system. Research scientists have the opportunity to move into three different career paths: a scientific path and two management paths. It is assumed that because employees can earn comparable salaries and have similar advancement opportunities in all three paths, they will choose the path that best matches their interests and skills. For example, Toshiba Medical Systems is reconsidering its retention strategies as baby boomers retire and Gen Xers move into leadership positions in the company.[104] Baby boomers tend to judge the success of their careers based on promotions, but younger employees place less value on level, title, and money. Recognizing this, Toshiba has developed both technical and managerial career ladders. The technical career ladders allow employees to continue to perform hands-on work in areas they enjoy but still allow them to move up in the company.

Effective dual-career paths have several characteristics:[105]

- Salary, status, and incentives for technical employees compare favorably with those of managers.
- Individual contributors' base salaries may be lower than that of managers, but they are given opportunities to increase their total compensation through bonuses (e.g., for patents and developing new products).
- The individual contributor career path is not used to satisfy poor performers who have no managerial potential. The career path is for employees with outstanding technical skills.
- Individual contributors are given the opportunity to choose their career path. The company provides assessment resources (such as psychological tests and developmental feedback, as discussed in **Chapters Nine** and **Eleven**). Assessment information enables employees to see how similar their interests, work values, and skill strengths are to those of employees in technical and managerial positions.

Career Recycling

Career recycling involves changing one's major work activity after having been established in a specific field. Recycling is accompanied by a re-exploration of values, skills, interests, and potential employment opportunities. Recycling is not just limited to older employees who are nearing retirement. Many companies that face a serious shortage of qualified employees are developing retraining programs in hopes of filling labor shortages with employees from other fields.[106] Companies are using these training programs to help recycle employees into new jobs and careers. For example, in the information technology (IT) field, companies face a shortage of qualified staff for internal help desks and customer service. Also, many persons with computer skills who seek these positions lack the interpersonal skills needed to give counsel and advice to users of software, databases, and company intranets. The computer consulting industry is training former stockbrokers, flight attendants, and bank tellers to work at help desks. These training programs are referred to as "boot camps" because the training emphasizes total immersion in the job, one-on-one supervision, and cramming into a short training program what knowledge and skills the employee needs to have.

For Nicholas DiBiase, recycling involved gaining new skills and applying what he learned from his previous career to a new one.[107] Nicholas always had a strong interest in physics, chemistry, and computers, but in college he majored in political science. He then took a job working as a managing director of quality assurance for a computer-hardware distribution company. He was interested in the company's software development department, but he did not have the necessary qualifications to get a position there. For 10 years he worked at his job but felt stuck. He did not have the time with a young family to go back to school to study a new field. But when his young daughter asked him about chess after she watched a *Harry Potter* movie, he began to study chess and won several tournaments. His experience mastering chess caused him to reevaluate his apprehension about the time it would take him to learn software programming. As a result, he started taking online courses in areas such as databases while he continued working. A friend who started a company that makes eyeware for light sensitive individuals offered him a technology job. He has used his newly acquired technology skills as well as the managerial expertise in his new career as a software developer.

Job Hopping

Job hopping refers to employees changing jobs, usually between companies, every two to three years. The pandemic may have altered some employees' perceptions of job hopping. Survey results show that younger employees want to stay with their employers for five or more years, rather than leave within two years.[108] Those who would leave in two years or less dropped from 49 percent in 2019 to 31 percent in 2020, while those who would prefer to stay long-term jumped from 28 percent in 2019 to 35 percent in 2020.

Is job hopping good for companies and employees? There are advantages and disadvantages to it, for both employees and companies.[109] For companies, job hopping results in a loss of talent and productivity that results from turnover, retraining, and recruitment costs. Also, job hopping makes it difficult to create and sustain a culture that supports relationships between employees or continuity in employee-customer relationships. Job hopping does provide companies with the opportunity to hire employees who have a variety of work experiences, which can allow the company to understand and implement best practices. Hiring employees who job hop may increase a company's flexibility and adaptability because these employees are capable of quickly learning different jobs. Also, employees who job hop likely do not need or have high expectations for job security, making it easier for the company to downsize if necessary. For employees, in addition to better pay and growth opportunities, job hopping can provide opportunities to work in a variety of industries and in different-sized companies and to gain new skills, experiences, and personal contacts. The downside of job hopping for employees is that they may not be staying in any one job long enough to complete important projects, develop personal networks, or gain relevant experiences. This may hurt their opportunity to obtain attractive job and career opportunities in the future.

Companies are unlikely to eliminate job hopping. However, companies can reduce job hopping and attract and retain talented employees by creating conditions for employee engagement, providing employees with growth opportunities, and offering incentives and rewards for good performance.

Coping with Career Breaks

Both men and women face major problems in trying to return to work after taking several months or years off for family-related or other reasons.[110] To help alleviate problems in finding work after a career break, General Motors runs a career re-entry program called Take 2.[111] The prime beneficiaries of the 12-week paid program are women and older workers who interrupted their careers to raise children, care for a sick family member, or follow a spouse to a new job.

Finding work after a career break is especially challenging for military veterans. Returning troops face many obstacles to finding employment or returning to their jobs, including lack of experience in the workplace, incomplete skill sets and education credentials, difficulty working in less structured situations without clear-cut guidelines and expectations, and psychological and physical challenges. But veterans are known to have many characteristics and skills that are valuable for employers, including attention to detail, self-discipline, problem solving and decision making in stressful situations, and teamwork. For example, PepsiCo, the food and beverage company, has hired more than 4,500 veterans.[112] PepsiCo hires veterans because it believes they have acquired skills such as quick thinking and balancing team member needs while still accomplishing the mission that are important for successful business leadership. Toby Johnson is currently vice president of sales operations at Frito-Lay. But before earning that position, she served in the military including flying an

Apache helicopter during the Iraq war. After completing her service, she studied at Harvard and held a summer internship that led to her first job managing a Frito-Lay factory. She founded Valor, PepsiCo's employee group for veterans. Valor helps PepsiCo's veteran employees transition into civilian life and supports military families.

Both the federal government and companies are involved in helping veterans return to work or find new jobs.[113] The **Uniformed Services Employment and Reemployment Rights Act** covers deployed employees' rights, such as guaranteeing jobs when they return except under certain circumstances. However, the job a service member returns to may be different from the one he or she left, and it could require new skills or be in a different location. Also, veterans who return to work have to prove themselves all over again, and some may have received disabling physical or psychological injuries from their military service. Dominion Energy, a power and energy company, participates in the Troops to Energy Jobs program. Developed under the Center for Energy Workforce Development (CEWD), the Troops to Energy Jobs program provides training in community and technical colleges and four-year universities to help veterans complete and finish their education in order to complement their current skill sets. The program helps veterans get placed in internships and permanent jobs, including jobs in engineering and security and as line workers and technicians. The Home Depot employs more than 30,000 veterans and for over 20 years has been recognized as a military-friendly company.[114] To support The Home Depot's military families, the company has launched a new program that will guarantee employment opportunities to associates who are spouses of relocating members of the military. Seventy-eight percent of military bases are within 20 miles of a Home Depot store or distribution center. The Home Depot will guarantee an offer of similar employment at a nearby location when military families relocate due to service requirements. The Home Depot offers specialized benefits for veteran associates, including military leave of absence, differential pay, and family support resources like counselors, financial advisors, and child care assistance directories.

Coping with Job Loss

Coping with job loss is a major career issue because of the increased use of downsizing to deal with excess staff resulting from corporate restructurings, mergers, acquisitions, and takeovers. Research suggests that layoffs do not result in improved profits, they have mixed effects on productivity, and they have adverse effects on the morale, workload, and commitment of employees who remain with the company.[115] Job loss also causes stress and disrupts the personal lives of laid-off employees.[116] Because of the potential damaging effects of downsizing, companies should first seek alternative ways to reduce head count (the number of employees) and lower labor costs. These alternatives may include asking employees to work fewer hours, offering early retirement plans, delaying wage increases, and deciding not to fill position openings created by turnover and retirements. However, job loss may be inevitable in the case of mergers or acquisitions (which may create redundant positions and an excess of employees with similar skills) or downturns in business that force the company to reduce labor costs by eliminating employees in order to survive.

The economic effects of the pandemic caused many businesses to close and workers to lose their jobs.[117] But recognizing the value of human capital and the investment they have made in recruiting, training, and developing employees, many companies have tried to furlough rather than layoff employees or permanently reduce the workforce. A **furlough** means employees are given a mandatory temporary leave during which they do not receive pay but they still receive benefits. During a furlough, employees may be required to take a certain number of unpaid days or hours or take a single block of unpaid time off. This means employers do not have to follow laws requiring giving employees 60 day notice in certain situations. Furloughs benefit both employees and the company. Furloughed employees receive benefits, can receive unemployment for the lost time, and have the possibility of being called back to work. Companies can quickly decide to furlough employees and if they rehire the employees later, they avoid recruiting and training costs. For example, La-Z-Boy cut

10 percent of its workforce and closed a manufacturing plant. But as economic conditions worsened, La-Z-Boy decided to furlough an additional 6,800 employees (70 percent of its workforce) rather than engage in a layoff. La-Z-Boy ended up bringing back 6,000 of those employees as the company experienced an upturn in demand for its products. Due to decreasing meat orders from its customers, Hormel Foods chose to furlough 350 employees at its plants rather than lay them off. Over 300 of the employees have since returned back to work.

From a career management standpoint, companies and managers have two major responsibilities. First, they are responsible for helping employees who will lose their jobs. Second, steps must be taken to ensure that the "survivors" of the layoff (the remaining employees) remain productive and committed to the organization.

To prepare employees for layoffs and reduce their potential negative effects, companies need to provide outplacement services. Outplacement services should include:[118]

- Advance warning and an explanation for the layoff.
- Psychological, financial, and career counseling.
- Assessment of skills and interests.
- Job seeking services, such as résumé-writing assistance and interview training.
- Job banks where job leads are posted and where out-of-town newspapers, phone numbers, and books regarding different occupations and geographic areas are available.
- Electronic delivery of job openings, self-directed career management guides, and values and interest inventories.

Typically, companies devote more resources to outplacing employees who have lost their jobs than to employees who remain. Employees in upper-level managerial and professional positions typically receive more personalized outplacement services (e.g., office space, a private secretary) than do lower-level employees.[119] Although losing a job causes grief and denial in employees, once employees have worked through their emotions, they are capable of carrying on a campaign to find a new job. Laid-off employees are certain of their future, in that they know that they need to seek alternative employment. However, for the **survivors** (employees who remain with the company following a downsizing), uncertainty about their future remains. Survivors feel some sense of gratification because they have kept their jobs. However, they do not know how safe their current job is, nor do they know in what direction the company is heading. Also, in many cases, survivors are expected to perform the work of the laid-off employees as well as their own. As a result, survivors experience considerable anxiety, anger toward top-level managers, cynicism toward reorganization and new business plans, resentment, and resignation.[120]

Survivors are more likely to view layoffs as fair if employees are asked to cut costs to avoid layoffs; the factors used to decide whom to lay off (e.g., performance, seniority) are applied equally to individual contributors and management employees; advance notice is provided; and clear and adequate explanations are given for the layoffs.[121] Survivors need to be trained to deal with increased workloads and job responsibilities due to the consolidation and loss of jobs. The company also needs to provide survivors with realistic information about their future with the company.

Meeting the Needs of Older Workers

As discussed in **Chapter One**, there is a shortage of talented employees in many industries. As a result, companies are trying to keep talented older employees working. Many potential retirees plan to cut back on work but not completely quit working. Due to concerns and lost income due to the pandemic and recent political instability, a survey conducted by a retirement planning website found that nearly one-third of people in their

50s and 20 percent in their 60s now plan to postpone retirement.[122] It also found that 59 percent of Americans in their 50s plan to work in retirement, 42 percent plan to work part-time, and 17 percent plan to work full time. To meet the needs of older workers and to avoid skill shortages, companies are offering alternative work schedules and arrangements, including part-time work, rehiring of retirees, and phased retirement programs in which employees gradually reduce their work hours.

When are employees considered "older" employees? As discussed earlier in the chapter, the Age Discrimination in Employment Act (ADEA) begins protecting employees at age 40. Discrimination under ADEA includes denying access for training programs and forcing employees to retire (without a legitimate reason). Mandatory retirement ages vary according to occupation: for air traffic controllers, it is 56; for pilots, it is 65; and for federal law enforcement officers, it is 57. Professional football players and other professional athletes are considered "old" at age 30. Older employees do not have higher absenteeism rates, are not more likely to put less effort in their work, and continue to gain knowledge and expertise as they approach retirement.[123] Older employees are as productive and customer-savvy as younger employees and they have valuable experience. For example, consider the expertise and continued accomplishments of Tom Brady as a quarterback even in his 40s, Madonna the music star in her 60s, Joe Biden as President in his 70s, and Warren Buffet in finance in his 80s.

Companies can take several actions to meet the needs of older employees.[124] First, flexibility in scheduling allows older employees to take care of sick spouses, go back to school, travel, or work fewer hours. Second, research suggests that the probability of receiving company-sponsored training peaks at age 40 and declines as an employee's age increases.[125] Companies need to ensure that older employees receive necessary training to avoid obsolescence and to be prepared to use new technology. Third, older employees need resources and referral help to address long-term health care and elder care issues. Fourth, assessment and counseling are necessary to help older employees recycle to new jobs or careers or transition to less secure positions in which responsibilities may not be as clearly defined. Fifth, it is important to recognize that as older employees' physical and mental abilities decline, they can rely on experience and motivation to avoid poor performance. Companies should consider moving valuable older employees who are suffering skill deterioration to other jobs.

For example, St. Luke's Health System is well-aware that an increasing number of its 15,000 employees are approaching retirement.[126] St. Luke's wants to keep employees with knowledge and experience as long as possible. To do so, St. Luke's provides options such as part-time positions and other job opportunities for older clinical workers. For example, many older nurses want to work, but they are no longer able to work night shifts or perform physically demanding tasks. To capitalize on their knowledge and experience, they can be transferred to other areas like the education department where they train other nurses. Finally, companies need to ensure that employees do not hold inappropriate stereotypes about older employees (e.g., that they fear new technology or cannot learn new skills).

Preretirement Socialization

Preretirement socialization is the process of helping employees prepare to exit from work. It encourages employees to learn about retirement life; plan for adequate financial, housing, and health-care resources; and form accurate expectations about retirement. Employees' satisfaction with life after retirement is influenced by their health, their feelings about their jobs, and their level of optimism. Employees who attend preretirement socialization programs have fewer financial and psychological problems and experience greater satisfaction with retirement compared to employees who do not attend these programs. These programs typically address the following topics:[127]

- Psychological aspects of retirement, such as developing personal interests and activities.
- Housing, including a consideration of transportation, living costs, and proximity to medical care.
- Health during retirement, including nutrition and exercise.
- Financial planning, insurance, and investments.
- Health-care plans.
- Estate planning.
- The collection of benefits from company pension plans and Social Security.

Formal preretirement socialization programs are primarily for employees who are considering retirement, but financial planning, estate planning, and purchasing insurance need to be done much earlier in their careers to ensure that employees will have the financial resources necessary to live comfortably during retirement. Preretirement socialization or retirement planning can help employees avoid being forced to return to work because of poor financial planning.

Many companies are also using phased retirement and alternative work arrangements such as rehiring retired employees to help employees make the transition into retirement while continuing to use their talents. **Phased retirement** involves employees transitioning from full-time employment to full-time retirement by working part-time. Phased retirement can benefit both companies and their employees.[128] It can help companies cope with the shortage of skilled employees in the labor market. It provides a source of income for employees who have seen the value of their retirement funds decrease during the economic recession. There are several different phased retirement plans. An employee can retire and return as an independent contractor, consultant, or part-time worker. The use of phased retirement plans is complicated by regulations regarding taxation of retirement benefits and concerns about continued health-care coverage (e.g., there is no legal definition of phased retirement, and the tax code has few regulations for how to offer phased retirement within a defined retirement benefits plan).

Consider the programs that several companies are offering to capitalize on older employees' skills and accommodate their needs.[129] At Herman Miller, a company that makes office furniture, more than 25 percent of the company's 8,000 employees are over age 55. All employees over age 60 with at least five years of employment are eligible for the company's FlexRetirement program. The program allows them to phase out of the workforce over a six-month to two-year period. Employees who want to begin phasing out of the workforce are required to participate in a meeting with their team leader and HR representative to discuss the impact on the work group. The employee also prepares a transition plan that identifies which job responsibilities they will keep and which will be shifted to another employee. Herman Miller also provides other opportunities that can help retirees ease out of the workforce including job sharing, telecommuting, part-time work, and unpaid leave for different lengths of time. Recognizing the value of skilled older workers, Huntington Ingalls Industries Inc., a military shipbuilding company, has multigenerational work teams, a rotation program in which workers can do different jobs, and a reverse mentoring program. The company also records videos of employees whose experience it wants to document completing tasks and talking about their work to share with less experienced employees. Morgan Stanley has a 12-week program (known as Return to Work) for professionals over 50 looking to reenter the workforce. The program provides opportunities in several different business areas including corporate services, risk management, and marketing. Program participants can request to be placed at one of Morgan Stanley's international offices including Mumbai, London, and Tokyo. Program graduates are often offered full-time positions after they complete the program.

Retirement

Retirement involves leaving a job and a work role and making a transition into life without work. For some employees, retirement involves mixing part-time employment with meaningful social activities or community work, or recycling into another career. Consider Don Mankin and Warren Dodge.[130] Don Mankin worked for 40 years teaching and writing. When he retired he decided to pursue writing travel guides and articles for his blog and magazines. This helped him get consulting opportunities and speaking engagements. Warren Dodge worked as an information technology and change management expert for Accenture. After retiring, he played golf, climbed Mount Kilimanjaro, and taught part-time at New York University. But he got bored and realized he wasn't growing personally. Through a network of former colleagues, he found consulting projects where he worked on innovation and change for nonprofits and global companies. Now, he is a part-time consultant for a staffing company, teaches college and university courses, and volunteers at his local church. UPS brings back its retirees when shipping demands are at their peak during the holiday season.[131] The retirees often have over 25 years of experience at the company, which means they know UPS's culture and procedures and don't need training. Hiring back retirees saves UPS millions of dollars.

By 2029, one out of four employees of the U.S. labor force will be 55 or older (recall our discussion of the characteristics of the labor force in **Chapter One**). Research shows that age, financial resources, poor health, and working in jobs with greater psychological and physical demands are all positively related to employees' decision to retire.[132] Historically, over half of all employees retire before age 63, and 80 percent leave by the time they are 70. This may be because employees accept companies' offers of early retirement packages, which usually include generous financial benefits. Also, employees may find work less satisfying and be interested in pursuing primarily nonwork activities as a source of satisfaction.

Early Retirement Programs

Early retirement programs offer employees financial benefits to leave the company. These programs are usually offered when companies are trying to reduce labor costs without having to lay off employees. Financial benefits usually include a lump sum of money and a percentage of salary based on years of service. These benefits can be quite attractive to employees, particularly those with long tenure with the company. Eligibility for early retirement is usually based on age and years of service.

Early retirement programs have two major problems. First, employees who may be difficult to replace may elect to leave the company. Second, older employees may believe that early retirement programs are discriminatory because they feel they are being forced to retire. To avoid costly litigation, companies need to make sure that their early retirement programs contain the following features:[133]

- The program is part of the employee benefit plan.
- The company can justify age-related distinctions for eligibility for early retirement.
- Employees are allowed to choose early retirement voluntarily.

Eligibility requirements should not be based on stereotypes about ability and skill decrements that occur with age. Research suggests that age-related declines in specific abilities and skills have little effect on job performance. Employees' decisions are considered voluntary if they can refuse to participate, if they are given complete information about the plan, and if they receive a reasonable amount of time to make their decisions.

Training plays an important role in early retirement programs. Companies teach employees to understand the financial implications of early retirement. Training programs are also used to help employees understand when and in what forms health benefits and retirement savings can be received. For example, retirement savings can often be distributed to retirees either as a one-time lump sum of money or as a payout of a specific amount of money each month, quarter, or year.

Summary

Public and privately held companies are in business to use tax dollars wisely and to create financial returns. But they also have a social responsibility to improve the communities where they are located by helping reduce poverty and unemployment, comply with laws and regulations, and help all employees contribute to company goals by helping them grow, develop, and address their career challenges. This directly benefits the local community and the workforce, but it also enhances the company's reputation, which helps attract, motivate, and retain talented employees. Through partnerships with government agencies, trade groups, labor unions, and foundations, a company's training and development function can develop the skills of the labor force to improve its employability and attract jobs to the local community. Also, being socially responsible means that training and development practices are accessible to all employees, they are treated appropriately during training activities, and copyright laws are followed (i.e., credit is given and payment is provided for materials used in courses). Today's workforce is not only diverse in race, gender, and national origin, but it is also multigenerational. To fully capitalize on the competitive advantage of diversity and meet social responsibility goals, companies need to proactively manage diversity, equity, and inclusion. This means going beyond diversity training to ensure that top management support diversity, managers are held accountable for diversity goals, employees are supported, and recruitment, hiring, and development are focused on identifying and nurturing the talent of all employees. Finally, companies need to help employees manage career challenges to increase their engagement, productivity, and reduce stress. The chapter discusses these challenges and the types of policies and programs that can help employees cope with them. The career challenges include work-life balance, career breaks, job loss, job hopping, recycling careers, and retirement.

Key Terms

sector partnerships *432*

Strengthening Career and Technical Education for the 21st Century Act *433*

School-to-Work Opportunities Act *433*

Workforce Innovation and Opportunity Act (WIOA) *433*

joint union-management training program *434*

copyright *436*

Title VII of the Civil Rights Act of 1964 *437*

Age Discrimination in Employment Act (ADEA) *437*

Americans with Disabilities Act (ADA) *439*

reasonable accommodation *439*

managing diversity, equity, and inclusion *440*

diversity training *441*

unconscious bias *441*

managing diversity and inclusion *442*

glass ceiling *447*

expatriate *449*

cross-cultural preparation *449*

repatriation *451*

work-life balance *453*

Family and Medical Leave Act (FMLA) *453*

telecommuting *455*

compressed workweek *456*

job sharing *456*

flextime *456*

career path *456*

dual-career-path system *459*

career recycling *460*

job hopping *461*

Uniformed Services Employment and Reemployment Rights Act *462*

furlough *462*

survivor *463*

preretirement socialization *464*

phased retirement *465*

retirement *466*

early retirement program *466*

Discussion Questions

1. What is a sector partnership? Why is it important? Provide an example of a sector partnership.
2. Assume you were asked to investigate whether or not a police officer training program adequately covered use of force. What would you review? Would you look at any data?
3. Explain the relationship between "managing diversity, equity, and inclusion" and "diversity training." Which is most effective? Why?
4. What is the purpose of unconscious bias training? Provide an example of how unconscious bias training can affect who gets to attend training or who is asked to participate in development activities.
5. What are the implications of reasonable accommodation when training employees with disabilities? Employees with religious beliefs?
6. Explain allyship training? How can allyship training contribute to companies' efforts toward diversity, equity, and inclusion?
7. Do employee resource groups such as those for women, Hispanics, veterans, and other groups help or hinder efforts to improve diversity and inclusion in the workplace? Explain your answer.
8. How would you prepare a team of three managers to go to Warsaw, Poland, to oversee the operations of a recently acquired financial services firm? They will be leaving in one month, and the assignment lasts two years.
9. What should companies do to develop talented women to take top management positions? Provide support for your recommendations.
10. How are career paths useful for employees? How can they contribute to company effectiveness?
11. What is job hopping? Which career challenges might a company focus on to reduce job hopping?
12. What advantages and disadvantages might a company gain by using phased retirement?
13. What are work-life programs? How are they related to work-family programs? What are some of the challenges in developing and using work-life programs?
14. How could you help the survivors of a downsizing remain motivated and productive? Which of your recommendations is most important? Explain why.

Application Assignments

1. Watch the video on diversity and inclusion at DuPont at www.youtube.com/watch?v=uHYuDDHvU64. Review www.dupont.com/careers/diversity-and-inclusion.html. Why does DuPont foster diversity and inclusion? What initiatives help create a diverse and inclusive culture at DuPont? Why do you think DuPont believes the recommendations provided in the video will help alleviate unconscious bias?
2. Watch these videos on unconscious bias from Google and McKinsey: www.youtube.com/watch?v=NW5s_-Nl3JE, www.youtube.com/watch?v=5eAwWMFZYbo. Next watch the TED Talk, "Are You Biased? I Am" at www.youtube.com/watch?v=Bq_xYSOZrgU. How can unconscious bias training help improve employees' access to development opportunities? What content should unconscious bias training emphasize in order to be effective?
3. Go to www.workingmother.com/best-companies. Review any five of the 100 Best Companies 2020 Winners. What practices do they use to help employees achieve a work-life and work-family balance? What types of outcomes or metrics would you collect to see if these practices were effective?

4. Go to http://fairuse.stanford.edu, a website called Copyright and Fair Use created by Stanford University's library system. How does work fall in the public domain? That is, how can you use someone else's work without having to obtain permission to use it?
5. Go to www.troopstoenergyjobs.com/about, a website created by the Center for Energy Workforce Development to help military veterans transition to a career in the energy industry. Click on "Roadmap." What are the steps that an interested veteran would take to get started in the program? Explain why each of the steps is important from a career or developmental perspective.
6. Watch YouTube videos about Generation Z and their career expectations at www.youtube.com/watch?v=nFaEPe6T_m4 and www.youtube.com/watch?v=DEFzXeq4EkA&t=4s. What characteristics of Generation Z are emphasized? How will these characteristics influence their needs at work and their career expectations? Do Gen Z career expectations vary from yours? Explain.
7. Go to www.ibm.org/initiatives/ibm-service-corps, the website for IBM's Corporate Service Corps. Choose one of the Corporate Service Corp engagements that are provided. Read about it and watch the video. How does the assignment help IBM? The local community where the assignment takes place? The employee who is sent on the assignment?
8. Watch the SHRM Foundation "Ernst & Young: Creating a Culture of Flexibility" online at www.youtube.com/watch?v=z9ixbBJ0YMA. What are the major challenges to creating a culture of flexibility? How does Ernst & Young manage those challenges?

Case: *Black Professionals at Coca-Cola*

Coca-Cola, the beverage company, wants to energize its diversity efforts. Over 20 years ago, the company agreed to pay over $190 million to settle a race discrimination lawsuit. In 2000, Coke made changes to its hiring, promotion, and pay practices to create a fair, equitable, and non-discriminatory workplace. Ten years later, in 2010, Black employees held 15 percent of executive positions in the U.S. compared to less than 2 percent before the lawsuit. However, in 2020, Blacks only hold 8 percent of executive positions. Many at Coca-Cola believe that the loss of Black representation in executive positions is because the company's diversity efforts expanded to include gender and other races and underrepresented groups. There was also a change in the way the company reported diversity numbers. For example, Coke stopped disclosing data by race but instead reports provided the percentage of multicultural employees, which included employees who were not White or Non-Hispanic. A company restructuring in 2017 led to a sharp decline in available Black talent who were recruited by other companies. Additionally, Black professionals left the company because they felt their advancement was too slow or they had limited influence. Also, Coke stopped linking executive pay to increasing diversity. Coke's hiring efforts contributed to the growth of a more diverse workforce including Black professionals but many did not find the culture welcoming or receive coaching and support necessary to develop a professional network within the company. Coke still does better than other companies in the representation of Blacks in executive and senior management positions. At competitor PepsiCo Inc., 6.3 percent of U.S. executives are Black. Among all companies, Black employees hold less than 4 percent of executive and senior manager roles.

Propose a plan for what Coke should do to increase the representation of Black professionals and executives in the company. Explain the rationale behind each aspect of your proposed plan. Make sure you indicate how you would determine the progress and success of your proposed plan.

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CHAPTER ELEVEN

The Future of Training and Development

Objectives

After reading this chapter, you should be able to

11-1 Explain the digital skills needed for employability and why they are important.

11-2 Discuss how artificial intelligence (AI), the Internet of things (IoT), and the learning experience platform will influence training and development.

11-3 Discuss how rapid instructional design and lean thinking differ from traditional training design.

11-4 Discuss how big data can be used to show how training supports business outcomes.

11-5 Discuss the impact of increased automation on jobs and training.

11-6 Explain how companies are trying to close the skill gap.

General Motors Workers Need to Recharge Their Skills to Build Electric Vehicles

General Motors Company is planning for a future of electric vehicles (EVs). By 2035, it expects to be selling only EVs, which currently generate approximately 2 percent of sales and no profit. GM is currently retooling a factory in Detroit, Michigan, to produce EVs. GM now has over 100,000 workers around the world. If the company meets its goal to only sell EVs by 2035, these workers' skill sets will have to change. For example, today's workers add components to an engine brought in from another plant. They add the transmission to the engine and add the assembly to the body of the vehicle. GM's platform for EVs has modular battery and drive units allowing for different combinations to be used for automobiles, trucks, crossovers, SUVs, and commercial vehicles. GM's new battery pack (Ultium) costs nearly 40 percent less than those found in GM's current EV, the Chevrolet Bolt.

The shift to EVs will have consequences for workers, their jobs, and the skills they need. The simpler design, fewer parts, and more flexible platforms of EVs mean less engineering and less assembly work. The number of jobs to produce batteries and electric motors and the power electronics will not be nearly as many as the number of jobs that are used to produce the parts of a gasoline vehicle. Workers will need digital skills to understand data analytics that are embedded in the diagnostic tools needed to keep equipment operating. Also, workers' skill requirements will change as the technology used to manufacture EVs changes due to innovation and automation of processes. Workers will be performing more complex tasks that require longer time to complete in the assembly of electric-powered compared to gasoline-powered vehicles. Workers will need to be adaptable and capable of using a wider number of skills due to changes in the workflow. Also, the shift to

EVs brings the potential for new jobs in electric battery assembly and software engineering, for example, and yet-to-be-imagined opportunities that will come with the development of autonomous vehicles that are still years away from mainstream use. In autonomous vehicles, artificial intelligence mimics and replaces human perceptual and decision-making processes that influence steering, breaking, speed control, and identification and avoiding obstacles. For todays' workers who manufacture parts for gasoline or diesel engines or assemble vehicles, this means they need to be retrained in new assembly processes and the skills needed to make parts for EV motors and the batteries that power them. The United Autoworkers union, recognizing the implications of EVs for its members, has called for retraining workers and a national plan to support this effort.

Sources: Based on M. Collias, "GM's Conversion Plan," *The Wall Street Journal* (February 22, 2021), p. R7; "Our Path to an All Electric Future," General Motors, from www.gm.com/electric-vehicles.html, accessed February 22, 2021; "GM Reveals All-New Flexible Platform and Ultium Batteries," General Motors from www.gm.com/our-stories/commitment/ev-battery-modular-technology.html, accessed February 22, 2021; J. Grzelewski, "In the Shift to EVs Some Worry Workers Could Suffer," *The Detroit News* (November 3, 2020), from www.govtech.com, accessed February 22, 2021.

Introduction

The previous 10 chapters have discussed training design and delivery, development and career management, and training's role in contributing to social responsibility through managing diversity and inclusion and helping the multigenerational workforce prepare and successfully deal with career challenges. This chapter takes a look at what the future of training and development might look like. The chapter opener highlights the implications of technological advances in artificial intelligence and battery power for how we live and the skills needed at work. Technological advances are likely to influence the future of training and development and your future as a trainer. **Table 11.1** shows the future trends discussed in this chapter that will influence training.

TABLE 11.1 Future Trends That Will Affect Training

- Automation of work
- Greater Need for Digital Literacy and Closing the Skills Gap
- Use of new technologies for training delivery and instruction
- Breakthroughs in neuroscience about learning
- Faster training design involving key stakeholders
- Increased use of just-in-time learning and performance support
- Increased emphasis on big data to show how learning helps the business

Automatization of Work

The use of automation to perform work previously done by employees is expected to increase quickly in the next decade. One survey found that robots and artificial intelligence (AI) are currently doing 12 percent of work but respondents report that their use will increase to 22 percent in the next several years![1] Over 60 percent of companies today do not use automation to complete work; rather they use it to support employees in their work by helping them to avoid mistakes and errors in performing tasks that can be automated, freeing employees' time for more important high-value work. About one-third of human resource functions have started to change their activities to prepare for increases in automation by identifying new skill requirements and matching talent to them. Twenty-five percent are planning to identify skill gaps in the future. However, 38 percent report they are unprepared to identify how to re-skill employees whose jobs are affected by automation. **Table 11.2** highlights some of the potential impacts of automation on work.

TABLE 11.2 The Potential Impact of Automation on Work

• Six out of 10 current occupations have more than 30 percent of work activities that can be automated using technology.
• By 2030, 15 percent of the global workforce representing over 400 million workers could be potentially displaced by the adoption of automation. Three percent (75 million workers) of the workforce will need to change their occupation.
• By 2030, up to one-third of the workforce in the United States and Germany and nearly 50 percent of the workforce in Japan may need to learn new skills and find jobs in new occupations.
• Worldwide 400 million jobs could be automated by 2030. But projected productivity gains and consumer demand would result in creating 890 million new jobs.

Sources: Based on M. Totty, "The Worlds That AI Might Create," *The Wall Street Journal* (October 14, 2019), pp. R1–R3; J. Manyika, S. Lund, M. Chui, J. Bughin, J. Woetzel, P. Batra, R. Ko, and S. Sanghvi, "Jobs Lost, Jobs Gained: Workforce Transitions in a Time of Automation" (McKinsey Global Institute, December 2017), from www.mckinsey.com, accessed April 12, 2018.

AI has helped the development of autonomous vehicles and robots. Annual installations of industrial robots have more than tripled in the last 10 years.[2] The World Robotics 2020 Industrial Robots report shows a record of 2.7 million industrial robots operating in factories around the world, an increase of 12 percent. The United States is the largest industrial robot user in the Americas with about 293,200 robots (an increase of 7 percent). There are also professional service robots that have advanced software, sensors, and Wi-Fi allowing them to work alongside people in their jobs.[3]

Jobs involving physical activities in predictable environments such as operating equipment and machinery and preparing food are increasingly being automated.[4] This includes jobs that consist of tasks that the robot can perform with equal if not more precision and consistency than humans (such as some forms of surgery) and tasks that are potentially harmful to humans (e.g., painting and welding). Also, work activities that involve collecting and processing data that occur in banking, finance, accounting, and legal work (such as preparing mortgages and computing taxes) can be done more efficiently and effectively through automation. For some jobs, this frees up the worker to perform more value-added tasks. For example, BeeHex, Inc. is building 3-D food printers that can decorate cookies or cakes. This means that pastry chefs can devote their time and energy to developing new flavors of cookies rather than spending their time icing dozens of cookies the same way. Scientists can use robotic lab equipment to more precisely run experiments. This enables the scientists to devote their time to thinking about other tests to conduct and experiments they want to perform.[5]

However, there are several activities where AI and robots cannot replace humans. Humans are still needed for jobs that require problem solving and creativity or for tasks that require adapting to quickly changing situations. This includes jobs that involve managing other people, exercising creativity, applying expertise, and engaging in social interactions (e.g., plumbers, child care workers, artists and performers, builders, and engineers and scientists). And AI is creating new jobs in data science, robotics, cybersecurity experts, and in training machine learning algorithms and is predicted to continue to do so.

Robots are also changing jobs rather than replacing workers. Truck driving jobs will not disappear, but they will change. Self-driving trucks relying on AI will still need drivers. The drivers will be located in a remote control center to help trucks navigate into and out of city or neighborhood streets and to get to highways where they can operate completely autonomously. Consider how the COVID-19 pandemic increased the popularity of online grocery shopping and pick up and delivery. As consumers realize the convenience of online grocery shopping, its popularity is expected to continue even when the pandemic is over. To meet consumer demand, Albertsons and several other grocers are using robots to fill online grocery orders.[6] The automated system consists of a series of tote boxes, rails, and conveyors built into the back of a grocery store. When an online order comes in, the robots taxi each item to a human who packs them all up for delivery or pick up. The use of robots allows for orders to be filled and ready for pick up or delivery more quickly than if all human workers were used. In jobs using robots to perform some of the tasks previously completed by humans, humans still need to monitor the robots to ensure they are performing as expected, provide necessary maintenance, and refine their skills through reprogramming.

Finally, for some jobs robots may be useful replacements for their human counterparts who are hard to find.[7] For example, bricklaying contractors are unable to find enough bricklayers, but a semi-automated mason (SAM) can help perform some, though not all, of the human mason's tasks. SAM cannot read blueprints or lay brick on corners or curves, and other workers have to load and refill its mortar and brick and cleanup the joints on the bricks it lays. SAM helps alleviate the shortage of bricklayers, but at a cost of $400,000 each.

Greater Need for Digital Literacy and Closing the Skills Gap

As discussed in **Chapter One**, a skills gap presents challenges for companies in the United States and around the world. The current education-to-employment system is not adequately preparing students and adults for the 21st century economy. As the future workplace becomes increasingly digitized, employees will need digital literacy skills. **Digital literacy** refers to the skills needed to interpret, create, and strategically use digital information.[8] Digital literacy will be required of most jobs, even those not considered as technology jobs. For example, it used to be sufficient for auto mechanics to know how to fix an out-of-tune engine. Today, they need to understand the software and apps built into modern cars. In the future, they will need to know how to service and maintain electric cars and autonomous vehicles. Occupations involving caring for the physical and mental well-being of others like personal care aides are seeing significant growth in digitization due to new technology. Remote patient monitoring, telehealth, and digital portals for tracking client information become part of the normal course of business.

The Rework America Business Network analyzed 715 occupations in the labor market, assessing both the current level of digitization within a given occupation and the rate of growth in digitization over the past decade.[9] Software developers and data scientists have positions that already involve digitization. However, warehouse packers and packagers have relatively low current digitization but will experience changes in digitization nearly twice those of the average occupation. McKinsey Global Institute analyzed the number of hours spent by U.S. workers on various tasks, the skills required for those tasks, and how those are expected to shift by 2030.[10] They found that the number of hours employees spent on advanced information technology activities will nearly double (growing by 91 percent). Tasks dependent on basic digital skills are expected to see the second-fastest growth but account for more working hours than advanced information technology activities. **Table 11.3** shows the minimal level of digital skills a worker is likely to need to be eligible for employment.

As discussed in **Chapter One**, other skills are also forecast to be in demand including social and emotional skills (leadership and managing others, taking initiative, negotiations, adaptability, empathy) and higher-level cognitive skills (creativity, critical thinking and decision making, and interpreting and processing complex information). A recent survey shows that 9 out of 10 executives and managers say their organizations either face skill gaps already or expect gaps to develop within the next five years.[11] Fewer than half say their companies know what their current skill levels are. Nearly three-quarters expect their organizations to invest more in learning and development over the next five years. Almost 50 percent of companies who have invested in reskilling have already seen benefits such as increases in employee and customer satisfaction and other business outcomes.

TABLE 11.3 Digital Skills Needed for Employability

• Problem solving using technology (Interpretation and use of digital information)
• Interaction with computers and mobile devices (Basic skills to interact with computers and mobile devices)
• Basic tools (Skill in common productivity and software tools)
• Data security and safety (Awareness of threats to computers and data and ways to protect them)
• Data ethics (How to behave legally and ethically in a digital context)
• Occupation-specific tools (Use of tools to complete tasks for a specific occupation)
• Analytics and data manipulation (Understand how to interact with and manipulate data)

Source: Based on Rework America Business Network, “Digital Blindspot: How Digital Literacy Can Create A More Resilient American Workforce” (October 2019) from markle.org, accessed February 23, 2021.

Some companies are already working alone or in partnership with training providers, community organizations, and two or four year colleges and universities to help develop digital literacy and close the skills gap (recall our discussion of training partnerships in **Chapter Ten**).[12] Stanley Black & Decker conducted interviews with its business unit leaders. Based on these interviews, skills in data fluency, comfort with new software, and baseline digital skills were identified as weaknesses. To improve these skills, the company took several actions. It partnered with online learning provider Coursera to provide courses in digital skills and developed a digital literacy credential that employees could learn from taking courses from academic institutions. Employees were provided with an app that allowed them to assess their digital skills, and based on their results, they were provided with training recommendations. On its learning management system, the company developed skill categories that map to career paths. The system highlighted the digital skills employees needed to develop at each position along the career path and provided them with links to internal courses and outside training providers to learn the skills.

Nationwide Mutual Insurance Company has committed $160 million over five years toward Future of Work, a new reskilling and upskilling program. It hopes the investment will enhance its business outlook and make it more competitive for talent. The Future of Work program’s purpose is to help make Nationwide attractive for top talent and prepare the future workforce. The program helps workers improve their digital literacy and give them opportunities to take training on important future skills. Each employee will receive an annual personalized learning curriculum focused on growing their skills. Reskilling opportunities for employees will vary by business-unit and will include career path options.

Google has programs that provide certifications leading to technology jobs. If students apply for a job related to the certificate, Google treats the certificates as equivalent to a four-year college degree. The certificate programs are developed by Google and offered online by Coursera. They can be completed in six months with a minimum of 10 hours of study per week. The cost is $49 per month but learners can apply for grants and scholarships. Certificates are offered in information technology support, data analytics, project management, and UX design. Individuals who complete a certificate also receive free resources to help them find a job. These resources include interview advice, mock interviews, resume building workshops, and career coaching sessions. Over 80 percent of individuals who completed certificates reported a positive impact on their career within three months. The median entry-job salary across all certificates is $55,500.

Increased Use of New Technologies for Training Delivery and Instruction

The use of new technologies will likely increase in the future for several reasons. First, the cost of these technologies will decrease. Second, companies can use technology to better prepare employees to serve customers and generate new business. Third, use of these new technologies can substantially reduce the training costs (e.g., travel, food, and housing) related to bringing geographically dispersed employees to one central training location. Fourth, these technologies allow trainers to build into training many of the desirable features of a learning environment (e.g., practice, feedback, reinforcement). Fifth, as companies engage in more nontraditional employment relationships (e.g., part-timers and consultants) and offer more alternative work arrangements (e.g., flexible work schedules and working from home), technology will allow training to be delivered to any place and at any time. Sixth, new technologies will make it easier for training and performance support to be accessible to learners anytime and anyplace.

Table 11.4 shows technological advances that will likely influence training delivery and instruction. As discussed in **Chapter Eight,** wearables are just beginning to be used for training and performance support solutions. Wearables provide smart eyewear technology and camera technology that gives employees hands-free, voice-activated access to procedures and checklists; live access to experts using tablet computers that allow data and live video sharing; the opportunity to review best-practice videos before or during the performance of complex procedures and operations; and real-time notifications and alerts. The technology is currently being used in energy and health care. An operator working on a remote oil rig or a surgeon in a sterile operating room can share live video with experts and get the advice needed to fix a broken valve or complete a medical procedure, respectively, while remaining focused on the equipment or patient. Wearable technologies can also potentially be used to provide useful needs assessment data by tracking what tasks employees perform the most. For example, electronic sensing badges worn by employees can track their workplace interactions.[13] The company that supplies the badges can integrate the interaction data with information about the employee's position, performance, and tenure to provide insights about how high-performing employees differ from average performers. This could be used to track learning and development needs over time. Based on their review of the data, employees could request coaching and mentoring.

TABLE 11.4 **New Technological Advances That Will Influence Training**

Wearables (smartwatches, smartbands, smart glasses)
Artificial Intelligence (AI)
Internet of Things (IoT)
Telepresence
Tin Can API (or Experience API)
Learning Records Store (LRS)
Learning Experience Platform (LXP)

Sources: Based on B. Betts, "Are LXPs the Next Big Thing?" *T+D* (January 2020), pp. 31–35; C. Mims, "Remote Work Won't Be Just for White-Collar Workers," *The Wall Street Journal* (October 23, 2020), pp. R4, R5; A. Moore, "A Learning Pulse Check," *T+D* (August 2017), pp. 62–67; J. Bersin, "How Do You Define Digital Learning?" *Chief Learning Officer* (June 2017), p. 12; "Top Ten Strategic Technology Trends for 2020" (October 21, 2019), from www.gartner.com, accessed March 10, 2021.

AI will become even more humanlike and accessible at a lower cost. There are several ways AI may influence learning in the future. One way is through providing every employee with a learning bot.[14] A learning bot helps employees by identifying and recommending the most important knowledge to get work done. Sonic Automotive is studying the use of AI for training, potentially creating a Siri- or Alexa-like application that associates will be able to ask a job-related question and get an answer without having to attend an online or instructor-led training course.[15] This type of application is especially important because it will be difficult for conventional training to be rapidly deployed to meet all of the knowledge and skill needs related to the rapid changes in the automobile industry—including the introduction of autonomous driving vehicles and new types of electric cars. Learning bots can also be used by training managers to analyze matches (or mismatches) between roles and tasks and to identify learning needs.

AI will be increasingly used for coaching and mentoring. For example, the coaching app Rocky is designed to help employees develop their leadership skills.[16] Rocky is a conversational AI bot that helps employees identify and work toward skill development goals. It also provides guidance and advice on how to reach the goal. Every day it asks employees questions to establish their mindset, identifies the skills they want to focus on, and provides recommendations to help them achieve their priorities. In the evening, Rocky asks employee to reflect on what was accomplished and the difficulties they are facing, and it provides advice to help them overcome the difficulties and enhance their skill development. Coaching apps will be especially valuable as supplements to traditional face-to-face coaching and mentoring, especially in situations where employees are working remotely and do not interact very often with their managers.

As was discussed throughout many of the previous chapters, AI is increasingly being used in many different aspects of training and development such as identifying training and development opportunities, providing support for training transfer, and delivering coaching to develop employees. As a result, ethical issues associated with AI will likely become more debated as AI is more fully utilized in training and development practices.[17] One ethical issue is whether AI is accessible and understandable to all employees regardless of disability, race, gender, orientation, or cultural background. Algorithms used in AI need to be developed with the input of a diverse group of employees to ensure they are not biased and everyone can benefit. Data security and transparency are also important. Employees' data should be only accessible by authorized users and secure from cyberattacks. Employees should also have permission to review, update, and edit personal training data that the company holds.

Internet of things (IoT) devices will become increasingly part of the workplace. **Internet of things (IoT) devices** refers to "smart devices," that is, physical objects embedded with sensors and Internet connections.[18] For example, apps on wearable devices can be used to track employees' locations and connect employees to seminars, courses, or available subject-matter experts who are in close geographic proximity to them. IoT helps make learning a continuous ongoing personalized experience that employees can engage in when it is needed. There is no need to wait for a formally scheduled class to learn!

Telepresence refers to a technology that allows a person to interact with a different place as if they were there.[19] This includes controlling robots remotely or holding virtual meetings. For example, a convenience store in Tokyo, Japan, keeps the shelves stocked using a robot. Its hands have suction and three opposable thumbs. The robot does not work on its own but is controlled remotely by a human working remotely somewhere in Tokyo who is wearing a virtual headset. Telepresence can help enhance the realism of digital learning and allows learning to occur remotely while the instructor or facilitator and the learner can interact synchronously in the same space.

The **Tin Can API** or **Experience API** is an open data specification for connecting experience data with learning tools.[20] This makes it possible to collect data about an employee's or a team's online and face-to-face learning experiences. Based on the premise that learning occurs everywhere, the Tin Can API allows the collection of data using a variety of different tools and methods, including simulations, virtual worlds, serious games, social collaboration, real-world experiences, and formal training programs. When an employee engages in learning, the Tin Can API sends statements (such as, "I did this") in the form of a learner, an action, and an activity to a Learning Records Store. The **Learning Records Store (LRS)** collects and stores all of the learning experiences in the form of statements that can be organized and presented in a meaningful way. LRSs can communicate with each other, allowing data about learning activities to be easily shared across organizations. Also, LRSs can be accessed by learning management systems and reporting tools. Employees can have their own "personal lockers," in which their personal learning history is stored. Enabled devices can automatically send Tin Can API statements when learning is ongoing and completed. The LRS can be used to show the relationship between learning experiences and business outcomes such as sales, revenue, customer satisfaction, safety, and employee engagement (recall our discussion of big data in **Chapter Six**, "Training Evaluation"). Also, if Tin Can API is incorporated into a company's learning management system, it can provide data on which training resources are being used and how often, identify the most active learners, and identify the times when learners are accessing training resources.[21] For example, The U.S. Coast Guard, a military branch, uses Experience API to collect data about learning experiences that its members have completed.[22] The members define their learning experience in simple language ("I took this course"), which are captured in the Learning Records Store. The statements are collected and linked to similar statements to show an individual's skills and identify patterns across role and job groupings that show success, development, and advancement. The Experience API allows the Coast Guard to record both members' completion of training courses it sponsors as well as training they complete outside of the organization. The Coast Guard wants to use the information collected to update job descriptions and to provide well-defined career paths. They also intend to use the information to provide certificates and badges to recognize members' skills.

A **learning experience platform (LXP)** refers to software that helps employees find training content and learning resources that are personalized to their needs. The use of LXP will help enhance digital learning, support continuous learning, and make self-directed learning easier. LXPs can do so in several ways.[23] First, it can provide employees with a learning path. Second, it can guide learning based on an evaluation of their skills. Third, it can provide learning recommendations based on use by other learners (like a Google page ranking). Fourth, an LXP can provide learning recommendations and offer text, video, and audio content identified based on a web search. Fifth, it can identify relevant learning content by asking employees questions to learn about their job and skills. Finally, it can embed mandatory training (such as sexual harassment training) into employees' work schedules and tasks. Effective LXPs are aligned with the company's business strategy. They help identify skills that are critical to develop to benefit an individual performance and career as well as align with business needs and goals.

Breakthroughs in Neuroscience About Learning

Advances in neuroscience are increasing researchers' ability to study the brain and its functioning.[24] This is leading to a better understanding of how we learn, which can be used to design more effective training and development programs. For example, researchers have shown that whether an idea can be easily recalled is linked to the strength of activating the hippocampus, located in the lower section of the brain, during a learning task. The stronger the stimulation to the hippocampus during learning, the greater the recall of the idea. Further research on the hippocampus has identified the conditions that are necessary for learning to occur (attention, generation, emotion, and spacing). From a training design perspective, this means that learners have to eliminate distractions; they need to make their own connections to new ideas; they need some but not an overwhelming amount of emotional stimulation; and long-term recall of learning is better when they learn information over several different time periods rather than all at once. Time Warner Cable Enterprises applied results of the hippocampus research to a leadership development program that included weekly videos, practice exercises, and a two-hour webinar. Learning in short, engaging bursts held managers' attention. Immediate, one-page practice tools were provided to help managers use what they saw in the videos. The entire program was spaced out over 30 days. The managers' emotions were stimulated by the communications about the sense of urgency for the program and the realization that thousands of their peers were participating in the program at the same time.

There are many other areas of ongoing neuroscience research that can potentially influence training and development program design. For example, research is helping us understand the conditions that are necessary for learners to make creative insights between learning content and its application to work issues and problems. Other research is investigating the biological markers of cognitive processes that are known to accelerate learning (e.g., self-explanation or other meaning-based processing methods), which can help us understand how feedback can be provided to learners to help them consistently use the most effective cognitive processes for learning.[25]

Faster Training Design Using Key Stakeholders

As discussed in **Chapter One**, "Introduction to Employee Training and Development," the traditional training design model has been criticized for several reasons, including it is a slow and methodical step-by-step process that takes too long to design training. **Rapid instructional design (RID)** is a group of techniques that allow training to be built more quickly. RID modifies the training design model, which consists of needs analysis, design, development, implementation, and evaluation (recall the discussion of agile instructional design in **Chapter One**). There are two important principles in RID.[26] One is that instructional content and process can be developed independently of each other. The second is that resources that are devoted to design and delivery of instruction can be reallocated as appropriate. *Design* includes everything that happens before the training experience; *delivery* is what happens during the training experience. For example, if a company has limited resources for training delivery, such as large groups of trainees and a tight schedule, extra time should be allocated to the design process.

Table 11.5 lists RID strategies. For example, learning preferences make it difficult to develop a training program that maximizes learning for all employees. As a result, if possible, training content can be offered through books, manuals, audiotapes, videotapes, and online learning. It may also be possible to combine some steps of the design process, such as analyses and evaluation. For example, knowledge tests and other evaluation outcomes may be based on task analysis and other needs analysis results. There is no need to conduct separate analyses of training needs and learning outcomes. If the client is convinced that there is a training need and if the trainer can quickly confirm this need, then there is no reason to conduct a full needs analysis (e.g., new regulations that affect business transactions in financial services, or product changes). Job aids such as checklists, worksheets, and performance support tools can be provided to employees based on the results of a task analysis to identify activities and decisions needed to complete a procedure. Job aids can be chosen to help employees complete the procedure, and training can be provided to teach employees how

TABLE 11.5 **Examples of RID Strategies**

- Focus on accomplishment and performance.
- Develop a learning system instead of an instructional system.
- Use shortcuts (e.g., use existing records for needs assessment; conduct focus groups).
- Combine different steps of the instructional design process.
- Implement training and continuously improve it.
- Skip steps in the instructional design process.
- Use existing course materials that can be customized with examples, exercises, and assignments.
- Develop instruction around job aids and performance support.
- Use recording equipment, the Internet, and e-mail to collect data and exchange information with SMEs.

Source: Based on S. Thiagarajan, "Rapid Instructional Development." In *The ASTD Handbook of Training Design and Delivery*, eds. G. Piskurich, P. Beckschi, and B. Hall. New York: McGraw-Hill Education, 2000, pp. 54–75.

to use the job aid. The point to keep in mind is that use of a training design process (or instructional design process), as discussed in **Chapter One**, should not be abandoned. Rather, in the future, trainers will further develop RID techniques or embrace agile design to reduce the time and cost and to increase the efficiency of training design in order to better meet business needs.

Agile design is another way to develop training more quickly in a way that addresses the needs of the user.[27] Originally used as a tool for software development, agile design includes the use of small teams that are constantly discussing their progress, validating their ideas, and collaborating with the learning customer to ensure that what they are developing meets their needs. Agile design emphasizes repeated small steps, rather than moving through the linear step-by-step process (analysis through evaluation) of developing learning traditionally emphasized in instructional design.

There are specific training design processes that emphasize agile instructional design. One is design thinking, which was developed to come up with creative solutions for problems. **Design thinking** refers to a training design process that includes empathize (understand your stakeholders and their needs), define, ideate, prototype, and test.[28] Another is designing learning based on lean management principles. **Lean management principles or lean thinking** involves providing customers with what they need using less effort, space, and time; existing resources; and reducing, and even eliminating, nonvalue activities.[29]

UnitedHealth Group used lean thinking to design and deliver training for pharmacists, order creation clerks, data entry technicians, and data entry exceptions clerks.[30] The project scope was large and had to be completed in a short time period. They created 92 training modules in 10 weeks. Each topic included demonstration, discussion, quizzes, and other activities. The design team took 1,900 hours to develop the training compared to an estimated 9,100 hours of development time needed if they used the ADDIE model, their usual design approach. To shorten the development time, the design team used a Scrum approach and a Kanban board. A scrum approach involves cross-functional design teams working in 2-week sprints completing small pieces of a project that are then shared with project stakeholders for approval (such as business SMEs). At UnitedHealth, the design team consisted of a training analyst, two developers of instructor-led training, an e-learning developer, and a curriculum maintenance specialist. A Kanban board is a visual representation of the project schedule and activities that need to be completed. All the projects and work are written on sticky notes or digital representations of them. Each sticky note moves across columns on the board representing certain activities that need to be completed until the work is finished. The Kanban board allows everyone on the design team to see their progress and the work that still needs to be done. Short meetings were held within each team to discuss what they have done, what needs to be accomplished, and identify any barriers they were facing. After two sprints, the teams met to identify best practices and their processes that needed improvement. Except for the short meetings, the team members collaborated via web-conferences and instant messaging.

Increased Use of Just-in-Time Learning and Performance Support

Companies are moving away from courseware and classes as a performance improvement method and are instead adopting true performance support that is available during the work process.[31] **Just-in-time learning** (or *embedded learning*) refers to learning that occurs on the job as needed; it involves collaboration and nonlearning technologies such as microblogs, and it is integrated with knowledge management.[32]

Embedded learning may become increasingly prevalent in the future because companies can no longer have employees attend classroom instruction or spend hours on online learning that is not directly relevant to their current job demands. Formal training programs and courses will not disappear but will focus more on the development of competencies that can benefit the employee and the company over the long term, whereas embedded learning will focus on providing the learning that the employee needs to complete key job tasks. Embedded-learning products include task-specific, real-time content and simulation that are accessible during work, as well as real-time collaboration in virtual workspaces.

Recent, rapid adoption of wireless technology is connecting employees directly to business processes. For example, radio frequency identification chips are implanted in products such as clothing, tires, and mechanical parts. These chips contain information that is beamed via radio waves to employees processing handheld wireless devices. The devices, the task context, and the performance environment are incompatible with classroom or courseware-based learning. Learning is a business process that is integrated with several other business processes. Learning is expected as a result of collaboration with employees and machines in the work process. Employees can be provided with real-time performance support through communications with experts and through automated coaching.

More digital learning will be used. As a result, instead of having to complete specific training classes, learning functions will focus on setting standards required to achieve accreditation, creating systems to allow employees to meet accreditation standards, and tracking completion of standards.[33] Achieving accreditation may involve taking courses, but also having specific job experiences, observing an expert-level employee, contributing content for helping peers and less experienced employees learn, and passing a test.

There is a new type of learner emerging, the "social cyborg," who integrates social networks into the way he or she thinks, learns, and solves problems.[34] These employees expect companies to accommodate their need to access the latest tools and technologies at work. Employees will increasingly expect training and development to include simulations, games, and virtual reality, which will become more realistic than they are today. Also, learners will expect training and development to use social media, and they will expect learning to be delivered when it is needed rather than during a scheduled course.

Increased Emphasis on Using Big Data to Show How Learning Helps the Business

Because of an increased emphasis on contributing to the company's competitive advantage, training departments will have to ensure that they are seen as both helping the business functions (e.g., marketing, finance, production) meet their needs and contributing to overall business goals and the "bottom line."[35]

This means understanding the business well enough to ask the right questions and develop an appropriate learning solution (recall the discussion of needs assessment in **Chapter Three**, "Needs Assessment"). Such questions might include how success will be measured and why the company has not thus far seen desired results. The role of the learning professional is to understand business challenges and consistently work to fill employee performance gaps. To enhance the business, learning professionals have to be aligned with the business and take responsibility for the relationship and the business outcomes from learning solutions; have an agreed-upon business outcome that is included in the learning function and business performance plan; attend business staff meetings and network with internal customers; and identify as a partner with the business with the joint goal of improving performance (recall the discussion of how training can support different business strategies in **Chapter Two**, "Strategic Training").

Today, many companies own their own software and hardware and keep them on-site in their facilities. However, cloud computing allows companies to lease software and hardware (this is known as being in the "cloud"). **Cloud computing** refers to a computing system that provides information technology infrastructure over a network in a self-service, modifiable, and on-demand environment.[36] Cloud computing can be delivered on-demand via the Internet (public cloud) or restricted to use by a single company (private cloud). Cloud computing gives companies and their employees access to applications and information from smartphones and tablets rather than relying solely on personal computers. It also allows groups to work together in new ways, can make employees more productive by allowing them to more easily share documents and information, and provides greater access to large company databases. From a learning perspective, this means that tools for conducting workforce analytics using metrics on learning, training and development programs, and social media and collaboration tools, such as Twitter, blogs, Google documents, and YouTube videos, are more easily accessible and available for use. Cloud computing also can make it easier for employees to access formal training programs from a variety of vendors and educational institutions. Finally, the cloud can be used to store learning data in a "warehouse" (such as Amazon Redshift), which makes it easily available for analysis of trends and predictions of business outcomes. In the future, the emerging interest in collecting and using big data related to learning, training, and development will continue to grow. As we discussed in **Chapter Six**, big data involves collecting data about users' activities, analyzing or mining the data to identify patterns and trends, and understanding how these patterns and trends link to business goals and outcomes. Big data can be useful for understanding what training methods best deliver what needs to be taught and identifying how employees learn, who the experts and leaders are in social networks, and what type of instruction will lead to positive reactions from learners and results.

Big data can be collected using different types of information systems. For example, Workday is a provider of cloud applications for human resources. Workday People Analytics can be used for succession planning, managing diversity, and reskilling through tracking employees' promotion rates, performance ratings, and skills.[37]

Implications of Future Trends for Trainers' Skills and Competencies

A recent study identified the capabilities and underlying expertise trainers (see **Figure 1.5** in **Chapter One**) need now and in the future. However, increased emphasis will also be placed on the ability of trainers to more effectively use technology to provide digital learning solutions. Also, as companies become more global, they will need to adapt training methods and content to local cultures.[38] **Table 11.6** shows the skills that trainers will need to develop in the future.

TABLE 11.6 Skills for Future Trainers

- Matching training content and methods to the local culture of the workforce
- Designing learning spaces, as well as content in technology-driven learning environments
- Using multimedia tools, including audio, video, webcasts, and live action
- Delivering and packaging training in different formats for beginners and experts
- Developing search-and-identify techniques so employees can find information and training when they need it
- Being a change agent: Facilitating learning and staying in touch with employees, managers, and business units to identify what they need and making suggestions regarding tools, processes, or procedures that could help them work more effectively
- Developing and delivering learning that is integrated with the job
- Providing and curating learning content; encouraging employees to discuss and share it
- Identifying the root cause of job and business problems
- Creating memorable learning experiences to motivate and engage learners
- Understanding career development, coaching, job rotation, and mentorship

- Using data analysis and data visualization techniques
- Communicating business information to multiple audiences
- Understanding and using social networking
- Capturing user-generated content
- Selecting, designing, and evaluating organizational research methods

Sources: Based on M. Soehren, "It's All About the Impact," *T+D* (June 2019), pp. 44–47; J. Meister and K. Mulcahy, *The Future Workplace Experience* (New York: McGraw-Hill, 2017); C. Malamed, "What Will Your Training Role Be in the Future?" (February 13, 2012), from www.astd.org, accessed April 24, 2015; M. Laff, "Trainers Skills 2020," *T+D* (December 2008), p. 42; P. Galagan, "New Skills for a New Work Reality," *T+D* (November 2011), pp. 26–29.

Summary

This chapter discussed future trends that are likely to influence training and development. These trends relate to training delivery, design, and helping companies close the skills gap, especially digital literacy. Trainers will be asked to design focused content more quickly, deliver learning using multiple training methods, and provide just-in-time performance support. New technology such as artificial intelligence (AI), Experience API, and learning experience platform will have a growing impact on training delivery in the future. There will be an increased emphasis on integrating training data with business data to show how training is contributing to the business strategy. These trends that trainers need to develop the capabilities and expertise included in the Association for Talent Development model discussed in Chapter One but also develop other skills such as content curation, data visualization techniques, and capturing user-generated content.

Key Terms

digital literacy ***482***

Internet of things (IoT) devices ***485***

telepresence ***485***

Tin Can API ***485***

Experience API ***485***

Learning Records Store (LRS) ***485***

learning experience platform (LXP) ***486***

rapid instructional design (RID) ***487***

agile design ***488***

design thinking ***488***

lean management principles or lean thinking ***488***

just-in-time learning ***488***

cloud computing ***489***

Discussion Questions

1. Do you think employers will continue to invest in education and training programs for their employees? Explain your position.
2. What can companies do to ensure employees have digital literacy and close other skills gaps?
3. How will the increased automation of work influence jobs and the skills employees need to perform those jobs?

4. Are robots going to displace all workers? Explain your answer.
5. What new skills will trainers need to be successful in the future?
6. What is rapid instructional design? How does it differ from the traditional training design process discussed in **Chapter One**? (See **Figure 1.2**.)
7. Explain how you could use lean thinking for developing online training.
8. How does the use of a learning experience platform (LXP) better link training to business strategy and goals?
9. What is cloud computing? How does it enable just-in-time training delivery?
10. Explain the excitement about using big data related to learning, training, and development. What's the usefulness of big data?
11. How is program design being influenced by neuroscience research?
12. What is digital literacy? Why is it necessary?

Application Assignments

1. This chapter discussed several trends that will influence the future of training. Based on future social, economic, political, or technological factors, identify one or two additional trends that you think will influence training. Write a two- to three-page paper summarizing your ideas. Make sure you provide a rationale for your trends.
2. Go to http://2oms.com/apps, the website for the Assessment and Development Group International. Review either Performance Coach or Super Manager (read the information provided about the app, install it, and try it for free). What are the strengths and weaknesses of the app you chose?
3. Go to the website for Guild Education at www.guildeducation.com. Review the information provided. How does Guild Education benefit companies? Their employees?
4. Valamis develops LXPs for other companies. Go to www.valamis.com/stories/amadeus. Watch the videos. How is the LXP helping Amadeus? What features does it provide that lead to more effective employee learning?
5. Watch the video, "The digital future of work: What skills will be needed?" at www.youtube.com/watch?v=UV46n44jnoA. What are the skills that the video emphasizes will be needed as automatization in the workplace continues to increase?
6. Watch the video "Meet the Robots at Amazon" at www.youtube.com/watch?v=HSA5Bq-1fU4. How have robots changed warehouse jobs at Amazon? How have skill requirements changed for those jobs? Provide a rationale for your answer.
7. Watch the video "The Three Big Ethical Concerns With AI" at www.youtube.com/watch?v=1LyacmzB1Og. Which of the concerns discussed have the largest implications for training and development applications? Where do you think AI can provide the most benefit for training and development yet have the lowest ethical risk? Explain your answers.
8. SAP SuccessFactors is cloud-based software for human resource management. Watch the video on SAP SuccessFactors People Analytics solution at www.youtube.com/watch?v=EYYVncd_FmQ. What insights related to training, development, and learning can this software provide?

Case: *Robots Make the Choice Cuts at Tyson Foods*

Tyson Foods, one of the biggest meat companies in the United States, has about 122,000 employees to process an estimated 20 percent of chicken, beef, and pork produced. But Tyson has found it difficult to recruit and retain workers, many of whom are immigrants. Annual turnover varies from 40 to 70 percent in meat processing plants. Also, meat processing is one of the most dangerous jobs in the U.S. economy due to the repetitive nature of the work and the heavy lifting that is often involved. Without enough workers, Tyson has had difficulty, especially during the pandemic when absentee rates were high, producing some cuts of meat. For example, high demand deboned and skinless chicken require more workers.

The use of robots is a potential solution to overcoming the labor shortage and increasing productivity. To try and shift from human meat cutters to robots, Tyson has a new, state-of-the-art facility, The Tyson Manufacturing Automation Center, designed to help the company develop more automation and robotics for its food production plants. The Center includes a machine vision tech lab that simulates the food production environment for extensive testing before machines go to the plant. It also has classrooms for training and learning how to use automation and robotics technology. Tyson is trying to teach machines to recognize and adjust to differences in meat color and shape. Compared to the parts used in making a car, meat comes in an infinite variety of shapes. Also, meat cutting requires fine skills that avoids waste and increases the yield of meat. For example, a loin boner can carve out a filet mignon without leaving too much on the bone. Meat left on the bone has to be turned into lower cost products such as hamburger meat or food. European meat plants use lasers and optical eyes to read cuts of meat as they pass on a conveyor belt and then send them to different departments where they are weighed, packaged, and shipped. Because of the technology in the European plants, one worker performs the work of eight or nine U.S. workers. Tyson has successfully developed an automated deboning system for chicken processing. The water-jet cutting system can carve up chicken breasts more precisely than can be accomplished by manual labor. This system has helped develop new products Tyson could not make using human workers.

Do you think that robots can totally replace human meat cutters? Why or Why not? What skills will meat processing employees need to be trained in to work alongside robots?

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Case 4 Learning in Practice

Eastern Bankshares Diversity Efforts

Eastern Bankshares, a local savings bank, is headquartered in Boston and has over 80 branches in Massachusetts, New Hampshire, and Rhode Island. It is a company with historically white leadership. But Eastern is trying to promote racial diversity in its leadership and positions throughout the bank. Eastern's lead director and president are Black. People of color make up one-third of the bank's board of directors, 17 percent of its management committee, and 40 percent of new hires. But Eastern has had difficulty moving employees of color into middle- and upper-level jobs. Also, Eastern has no Latino or Latina employees at the senior vice president level or higher. Unintentionally, Eastern used to categorize Black, Latino, and Asian employees as people of color, rather than looking at their placement separately by business unit or position. This made it difficult to see gaps in employment of these employees in certain positions. To remedy this problem, Eastern is developing a detailed human resources dashboard that shows its workforce hiring, promotions, and turnover by race and gender and department and position.

The company is trying to create a diverse and inclusive environment to support innovation, enhance its ability to serve a broader group of customers, and support efforts to build strong ties in the communities in which it operates. It has done so in several ways. For the eighth consecutive year, Eastern Bank received a perfect score on the Human Rights Campaign Foundation's Corporate Equality Index (CEI). The Index is a benchmarking survey that measures company policies and practices related to LGBTQ workplace equality. After George Floyd's death, the CEO held meetings with Black employees who told them their business units lacked diversity. The CEO also sent a letter to all customers supporting Black Lives Matter and asked one of the bank's advisory board members to speak to the board of directors on the history of racism. The company also put up signs supporting Black Lives matter at the request of Black employees. The bank's hiring team attends a number of events each year, such as diversity-specific career and networking events, to try and find diverse talent. Eastern's foundation also provides donations to community groups and grants targeted to specific issues. The company collaborated with other businesses and organizations to encourage the state government to dedicate the second Sunday of June each year as a day to reflect on and celebrate the diverse cultural backgrounds of the people of Massachusetts and to build understanding across races. To enhance its diversity and inclusion efforts, Eastern is hiring a diversity consultant.

Questions

1. What could be responsible for the lack of Black, Latino, and Asian employees in middle- and upper-level positions at Eastern Bankshares?
2. What actions should Eastern Bankshares take to accelerate the movement of Black, Latino, and Asian employees into these positions?
3. Evaluate Eastern Bankshares current efforts to manage diversity. What grade would you give them (A, B, C, D, or F)? Provide an explanation for your grade. If you were the diversity consultant, what recommendations would you give them to improve their diversity and inclusion efforts? List your recommendations and provide a rationale for each one.

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Glossary

360-degree feedback A special case of the upward feedback system. Here employees' behaviors or skills are evaluated not only by subordinates but also by peers, customers, bosses, and employees themselves via a questionnaire rating them on a number of dimensions.

70-20-10 model A common learning model that assumes that 70 percent of learning occurs on the job, 20 percent occurs socially through coaching and mentoring, and 10 percent occurs through formal classroom instruction.

ability The physical and mental capacity to perform a task.

action learning A training method that involves giving teams or work groups a problem, having them work on solving it and committing to an action plan, and then holding them accountable for carrying out the plan.

action plan A written document detailing steps that a trainee and the manager will take to ensure that training transfers to the job.

adaptive training Training that customizes or adapts the content presented to trainees based on their learning style, ability, personality, or performance.

advance organizers Outlines, texts, diagrams, and graphs that help trainees organize information that will be presented and practiced.

adventure learning A training method focusing on developing teamwork and leadership skills using structured outdoor activities.

affective outcomes Outcomes including attitudes and motivation.

Age Discrimination in Employment Act (ADEA) A federal law that prohibits discrimination against individuals 40 years of age or older.

agile design Emphasizes repeated small steps, rather than moving through the linear step-by-step process (analysis through evaluation) of developing learning traditionally emphasized in instructional design.

agile learning or agile instructional design Any approach to training development that focuses on speed, flexibility, collaboration, repeated review, and reuse of existing content, if appropriate.

ally training Training that encourages employees to have conversations about difficult topics and perspectives without fear of blame or shame.

Americans with Disabilities Act (ADA) A 1990 act prohibiting workplace discrimination against people with disabilities.

andragogy The theory of adult learning.

application assignments Assignments that require trainees to identify work problems or situations and to apply training content to solve them.

application planning The preparing of trainees to use key behaviors on the job.

apprenticeship A work-study training method with both on-the-job and classroom training.

apps Applications designed specifically for smartphones and tablet computers that are being used to supplement training, manage the path or sequence of training, and help employees maintain training records.

artificial intelligence (AI) The development of a system such as a computer, a computer-controlled robot, or software that thinks intelligently like humans.

assessment center A process in which multiple raters or evaluators (also known as assessors) evaluate employees' performances on a number of exercises.

assessment The collecting of information and providing of feedback to employees about their behavior, communication style, or skills.

asynchronous communication A non-real-time interaction in which people cannot communicate with each other without a time delay.

attitude Combination of beliefs and feelings that predispose a person to behave in a certain way.

audiovisual instruction Media-based training that is both seen and heard.

augmented reality (AR) A live direct or indirect view of a physical, real-world environment whose elements are supplemented by computer-generated sound, video, graphics, or GPS data.

automatization Making performance of a task, recall of knowledge, or demonstration of a skill so automatic that it requires little thought or attention.

avatar A computer depiction of humans that are used as imaginary coaches, co-workers, and customers in simulations.

balanced scorecard A means of performance measurement that allows managers to view the overall company performance or the performance of departments or functions (such as training) from the perspective of internal and external customers, employees, and shareholders.

bandwidth The number of bytes and bits (information) that can travel between computers per second.

basic skills Skills necessary for employees to perform their jobs and learn the content of training programs.

behavior modeling A training method in which trainees are presented with a model who demonstrates key behaviors to replicate and provides them with the opportunity to practice those key behaviors.

bench strength A pool of talented employees who are ready to move to new jobs or positions when they are needed.

benchmarking The use of information about other companies' training practices to help determine the appropriate type, level, and frequency of training.

benefits The value a company gains from a training program.

big data Complex data sets characterized by volume, variety, and velocity that are developed by compiling data across different organizational systems, including marketing and sales, human resources, finance, accounting, customer service, and operations.

blended learning Learning that involves a combination of online learning, face-to-face instruction, and other methods.

blog A webpage where an author posts entries and readers can comment.

boosters Short multiple-choice, short-answer quizzes, or other activities that can help learners consider training information as important and help retain it.

brand The look and feeling of the training function that is used to create expectations for its customers.

business game A training method in which trainees gather information, analyze it, and make decisions.

business process outsourcing The outsourcing of any business process, such as human resource management, production, or training.

business strategy A plan that integrates a company's goals, policies, and actions.

business-embedded (BE) training Training that aligns closely with the company's business strategy and that is characterized by five competencies: strategic direction, product design, structural versatility, product delivery, and accountability for results.

career management system A system to motivate and retain employees by identifying and meeting their career and development needs. Also called *development planning system*.

career path A sequence of job positions involving similar types of work and skills that employees move through in a company.

career recycling Changing one's major work activity after having been established in a particular field.

career support Coaching, protection, sponsorship, and provision of challenging assignments, exposure, and visibility to an employee.

case study A story or adapted version of a realistic topic that describes an individual, company, product, situation, or event and discusses its impact or outcome.

centralized training Organizing the training department so that training and development programs, resources, and professionals are primarily housed in one location and decisions about training investment, programs, and delivery are made from that department.

change The adoption of a new idea or behavior by a company.

chatbots Artificial intelligence systems that create an automated personalized conversation with human users.

chief learning officer (CLO) A leader of a company's knowledge management efforts (also called *knowledge officer*).

climate for transfer Trainees' perceptions about a wide variety of characteristics of the work environment; these perceptions facilitate or inhibit use of trained skills or behavior.

closed skills Training objectives that are linked to learning specific skills that are to be identically produced by the trainee on the job.

cloud computing A computing system that provides information technology infrastructure over a network in a self-service, modifiable, and on-demand environment.

coach A peer or manager who works with employees to motivate them, help them develop skills, and provide reinforcement and feedback.

cognitive ability Verbal comprehension, quantitative ability, and reasoning ability.

cognitive outcomes Outcomes that are used to measure what knowledge trainees learned in a training program.

cognitive strategies Strategies that regulate the learning processes; they relate to the learner's decision regarding what information to attend to, how to remember, and how to solve problems.

cognitive theory of transfer Transfer of training is enhanced through increasing trainees storage and retrieval of information through providing meaningful material and cognitive strategies for coding learned capabilities in memory.

community of practice (COP) A group of employees who work together, learn from each other, and develop a common understanding of how to get work accomplished.

comparison group A group of employees who participate in an evaluation study but do not attend a training program.

competency model A model identifying the competencies necessary for each job as well as the knowledge, skills, behavior, and personal characteristics underlying each competency.

competency An area of personal capability that enables employees to perform their job.

competitive advantage An upper hand over other firms in an industry.

competitiveness A company's ability to maintain and gain market share in an industry.

compressed workweek A work schedule that allows employees to work fewer days but with longer hours, for example, four days ten hours each day.

computer-based training (CBT) An interactive training experience in which the computer provides the learning stimulus, the trainee must respond, and the computer analyzes the responses and provides feedback to the trainee.

concentration strategy A business strategy that focuses on increasing market share, reducing costs, or creating a market niche for products and services.

concept map A figure showing all of the concepts in a course, the topics covered in each concept, and the relationship between concepts.

consequences Incentives that employees receive for performing well.

content curation The process of identifying relevant training content and organizing it in a way that makes it easy for trainees to access it.

control A manager's or employee's ability to obtain and distribute valuable resources.

coordination training Training a team in how to share information and decision-making responsibilities to maximize team performance.

copyright Legal protection for the expression of an idea.

corporate university A centralized training organization in which learning is provided to not only company employees and managers but also stakeholders outside the company.

cost-benefit analysis The process of determining the economic advantages of a training program using accounting methods.

course or program Includes units or lessons that are smaller sections or modules covering different topics that can involve several hours, half-days, full days, or even weeks.

criteria relevance The extent to which training outcomes relate to the learned capabilities emphasized in training.

criteria Measures that a company and its trainer use to evaluate training programs. Also called *training outcomes*.

criterion contamination When a training program's outcomes measure inappropriate capabilities or are affected by extraneous conditions.

criterion deficiency The failure to measure training outcomes that were emphasized in training objectives.

cross-cultural preparation The education of employees (expatriates) and their families who are to be sent to a foreign country.

cross-training A training method in which team members understand and practice each other's skills so that members are prepared to step in and take another member's place should someone temporarily or permanently leave the team; also, more simply, training employees to learn the skills of one or several additional jobs.

crowdsourcing Asking a large group of employees (the crowd) using social media or the web to help provide information for needs assessment.

curriculum road map A figure showing all of the courses in a curriculum, the paths that learners can take through it, and the sequences in which courses have to be completed.

curriculum An organized program of study designed to meet a complex learning objective such as preparing a learner to become a salesperson, certified computer network technician, or licensed nurse.

customer capital The value of relationships with persons or other organizations outside a company for accomplishing the goals of the company (e.g., relationships with suppliers, customers, vendors, and government agencies).

dashboards A computer interface designed to receive and analyze the data from departments within the company to provide information to managers and other decision makers.

design thinking A training design process that includes empathize (understand your stakeholders and their needs), define, ideate, prototype, and test.

detailed lesson plan The translation of the content and sequence of training activities into a guide used by the trainer to help deliver training.

development planning system A system to motivate and retain employees by identifying and meeting their career and development needs. Also called *career management system*.

development Formal education, job experiences, relationships, and assessments of personality and abilities that help employees prepare for the future.

digital collaboration An interaction between two or more people mediated by a computer; the use of technology to enhance and extend employees' ability to work together regardless of their geographic proximity.

digital learning Learning that can occur daily in the work setting using devices such as smartphones, tablets, and computers.

digital literacy Skills needed to interpret, create, and strategically use digital information.

direct costs Costs that are actually connected to training, including the salaries and benefits of all employees involved, program supplies, equipment and classroom rental or purchase, and travel costs.

discrimination The degree to which trainees' performances on an outcome actually reflect true differences in performance.

disinvestment strategy A business strategy that emphasize the liquidation and divestiture of businesses.

distance learning Training method in which geographically dispersed companies provide information about new products, policies, or procedures as well as skills training and expert lectures to field locations.

diversity training Training programs designed to change employees' attitudes about diversity and/or to develop skills needed to work with a diverse workforce.

diversity Any dimension or characteristic that differentiates one person from another.

downward move The reduction of an employee's responsibility and authority.

dual-career-path system A career path system that enables technical employees to either remain in a technical career path or move into a management career path.

e-learning Instruction and delivery of training by computer online through the Internet or web. Also called *online learning*.

early retirement program A system of offering (usually older) employees financial benefits to leave a company.

elaboration A learning strategy requiring the trainee to relate the training material to other more familiar knowledge, skills, or behavior.

electronic performance support system (EPSS) A computer application that can provide, as requested, skills training, information access, and expert advice.

employee engagement The extent to which employees are fully involved in their work and the strength of their commitment to their job and the company.

enabling learning objective Objective that identifies parts of the terminal learning objective that trainees must learn during training.

equity Fair treatment, access, opportunity, and advancement for all employees, while at the same time striving to identify and eliminate barriers that have prevented the full participation of some groups.

error management training Training in which trainees are given opportunities to make errors, which can aid in learning and improve trainees' performance on the job.

evaluation design Designation of what information is to be collected, from whom, when, and how to determine the effectiveness of training.

expatriate A person working in a country other than his or her nation of origin.

expectancy The belief about the link between trying to perform a behavior (or effort) and actually performing well; the mental state that the learner brings to the instructional process.

Experience API A specification for learning technology that makes it possible to collect data about an employee's or a team's online and face-to-face learning experiences. Also called *Tin Can API*.

experiential learning A training method in which participants (1) are presented with conceptual knowledge and theory, (2) take part in a behavioral simulation, (3) analyze the activity, and (4) connect the theory and activity with on-the-job or real-life situations.

expert systems Technology (usually software) that organizes and applies human experts' knowledge to specific problems.

explicit knowledge Knowledge that can be formalized, codified, and communicated.

external analysis Examining the company's operating environment to identify opportunities and threats.

external conditions Processes in the learning environment that facilitate learning.

external growth strategy A business strategy emphasizing acquiring vendors and suppliers or buying businesses that will allow the company to expand into new markets.

external validity The generalizability of study results to other groups and situations.

Family and Medical Leave Act (FMLA) A federal law that provides for up to 12 weeks of unpaid leave for parents with new infants or newly adopted children; also covers employees who must take a leave of absence from work to care for a family member who is ill or to deal with a personal illness.

far transfer Trainees' ability to apply learned capabilities to the work environment even though it is not identical to the training session environment.

feedback Information that employees receive while they are performing about how well they are meeting objectives.

fidelity The extent to which a training environment is similar to a work environment.

flextime Providing employees with the option of choosing when to work during the workday, workweek, or work year.

flipped classroom A type of blended learning in which learners watch lectures online, complete simulations, read books and articles, take quizzes to assess their knowledge and skills, and then come to class to work on projects and cases, hear speakers, and interact with instructors.

focus group A face-to-face meeting with subject-matter experts (SMEs) in which specific training needs are addressed.

formal education An off-site or on-site program designed for a company's employees, a short course offered by a consultant or school, an executive MBA program, or a university program in which students live at the university while taking classes.

formal training and development Training and development programs, courses, and events that are developed and organized by the company.

formative evaluation Evaluation conducted to improve the training process; usually conducted during program design and development.

furlough Employees are given a mandatory temporary leave during which they do not receive pay but they still receive benefits.

future letter A letter trainees are asked to write to themselves that explains how they will use the training content (knowledge or skills) on the job.

gap analysis Determining the difference between employees' current and expected performance.

generalization A trainee's ability to apply learned capabilities to on-the-job work problems and situations that are similar but not identical to problems and situations encountered in the learning environment.

generalizing Adapting learning for use in similar but not identical situations.

gig economy Companies who rely primarily on nontraditional employment to meet service needs and product demands.

glass ceiling A barrier to advancement to an organization's higher levels.

goal orientation A trainee's goals in a learning situation.

goal setting theory A theory assuming that behavior results from a person's conscious goals and intentions.

goal setting An employee's process of developing short- and long-term career objectives.

goals What a company hopes to achieve in the medium- to long-term future.

gratifying The feedback that a learner receives from using learning content.

group building method A training method designed to improve team or group effectiveness.

group mentoring program A program in which a successful senior employee is paired with a group of four to six less experienced protégés to help them understand the organization, guide them in analyzing their experiences, and help them clarify career directions. Also called *peer mentoring program*.

guided team self-correction Training that emphasizes continuous learning and knowledge sharing in teams through team members observing each other's behavior and giving and receiving performance feedback.

hands-on method A training method in which the trainee is actively involved in learning.

Hawthorne effect A situation in which employees in an evaluation study perform at a high level simply because of the attention they are receiving.

high-potential employee An employee who the company believes is capable of succeeding in a higher-level managerial position.

human capital management The integration of training with other human resource functions so as to track how training benefits the company.

human capital The sum of the attributes, life experiences, knowledge, inventiveness, energy, and enthusiasm that a company's employees invest in their work.

human resource development The integrated use of training and development, organizational development, and career development to improve individual, group, and organizational effectiveness.

human resource management (HRM) practices Management activities relating to investments in staffing, performance management, training, and compensation and benefits.

human resource management The policies, practices, and systems that influence employees' behavior, attitudes, and performance.

human resource planning The identification, analysis, forecasting, and planning of changes needed in a company's human resources area.

hyperlinks Links that allow a user to easily move from one web page to another.

icebreaker An activity at the beginning of training designed to welcome trainees and encourage conversation among them.

impact mapping The process of using a small group of individuals who are stakeholders in training (SMEs, instructional designers, managers of trainees) to identify and agree on training program outcomes.

in-basket A training exercise involving simulation of the administrative tasks of the manager's job.

inclusion Creating an environment in which employees share a sense of belonging, mutual respect, and commitment with others so they can perform their best work.

indirect costs Costs not related specifically to a training program's design, development, or delivery.

informal learning Learning that is learner initiated, involves action and doing, is motivated by an intent to develop, and does not occur in a formal learning setting.

informational interview An interview an employee conducts with a manager or other employee to gather information about the skills, job demands, and benefits of that person's job.

input Instructions that tell employees what, how, and when to perform; also, the resources that employees are given to help them perform their jobs.

instruction The characteristics of the environment in which learning is to occur.

Instructional System Design (ISD) A process for designing and developing training programs.

instrumentality In expectancy theory, a belief that performing a given behavior is associated with a particular outcome.

intellectual capital The codified knowledge that exists in a company.

intellectual skills The mastery of concepts and rules.

interactive distance learning (IDL) The use of satellite technology to broadcast programs to different locations, allowing trainees to respond to questions posed during the training program using a keypad.

internal analysis Identifying the company's strengths and weaknesses based on examining the available quantity and quality of financial, physical, and human capital.

internal conditions Processes within the learner that must be present for learning to occur.

internal growth strategy A business strategy focusing on new market and product development, innovation, and joint ventures.

internal validity Establishing that a treatment (training) made a difference.

Internet of things (IoT) devices "Smart devices," that is, physical objects embedded with sensors and Internet connections.

interview Employees answer questions about their work and personal experiences, skill strengths and weaknesses, and career plans.

ISO 10015:2019 Quality management guidelines detailing how to establish, implement, maintain, and ensure training and development systems help employees' obtain the knowledge and skills they need to perform effectively.

ISO 10015 A quality management tool designed to ensure that training is linked to a company's needs and performance.

ISO 9000:2000 A family of standards developed by the International Organization for Standardization that includes 20 requirements for dealing with such issues as how to establish quality standards and document work processes.

job analysis The process of developing a description of a job (duties, tasks, and responsibilities) and the specifications (knowledge, skills, and abilities) that an employee must have to perform it.

job enlargement The adding of challenges or new responsibilities to an employee's current job.

job experience The relationships, problems, demands, tasks, and other features that an employee faces on the job.

job hopping The practice of employees changing jobs, usually between companies, every two to three years.

job incumbent An employee currently holding a particular job.

job rotation Assigning employees a series of jobs in various functional areas of a company or movement among jobs in a single functional area or department.

job sharing A work situation in which two employees divide the hours, responsibilities, and benefits of a full-time job.

job A specific position requiring completion of certain tasks.

joint union-management training program A program created, funded, and supported by both union and management to provide a range of services to help employees learn skills that are directly related to their jobs and that are "portable" (valuable to employers in other companies or industries).

just-in-time learning Learning that occurs on the job as needed. Also called *embedded learning*.

kaizen Strategy in which employees from all levels of the company focus on continuous improvement of business processes.

key behavior One of a set of behaviors that is necessary to complete a task; an important part of behavior modeling training.

knowledge management The process of enhancing company performance by designing and implementing tools, processes, systems, structures, and cultures to improve the creating, sharing, and use of knowledge.

knowledge officer A leader of a company's knowledge management efforts (also called a chief learning officer).

knowledge workers Employees who own the means of producing a product or service. These employees have a specialized body of knowledge or expertise that they use to perform their jobs and contribute to company effectiveness.

knowledge Facts or procedures that individuals or teams of employees know or know how to do (human and social knowledge); also a company's rules, processes, tools, and routines (structured knowledge).

lapse Situation in which a trainee uses previously learned, less effective capabilities instead of trying to apply capabilities emphasized in a training program.

leaderless group discussion A training exercise in which a team of five to seven employees must work together to solve an assigned problem within a certain time period.

lean management principles or lean thinking Providing existing customers with what they need using less effort, space, and time, existing resources, and reducing, and even eliminating, nonvalue activities.

lean thinking Doing more with less effort, equipment, space, and time, but providing customers with what they need and want. Part of lean thinking includes training workers in new skills or how to apply old skills in new ways so that they can quickly take over new responsibilities or use new skills to help fill customer orders.

learner control A trainee's ability to learn actively through self-pacing exercises, selecting how content is presented, exploring links to other material, and having conversations with other trainees and experts.

learner-content interaction The learner interacts with the training content such as reading text on the web or in books, listening to multimedia modules, and engaging in activities that require the manipulation of tools or objects such as writing and completing case studies.

learner-instructor interaction Discussion between the learner and the expert (trainer).

learner-learner interaction Discussion between learners with or without an instructor.

learning council Group of key stakeholders, typically includes executives and company leaders, who are asked to provide insight and recommendations about the company's training needs.

learning experience platform (LXP) Software that helps employees find training content and learning resources that are personalized to their needs.

learning management systems (LMS) A system for automating the administration of online training programs.

learning organization A company that has an enhanced capacity to learn, adapt, and change; an organization whose employees continuously attempt to learn new things and then apply what they have learned to improve product or service quality.

learning orientation Learners who focus on increasing their ability or competence in a task.

learning portal An online access point for training resources.

Learning Records Store (LRS) A technology that collects and stores employees' learning experiences in the form of statements that can be organized and presented in a meaningful way.

learning The acquisition of knowledge by individual employees or groups of employees who are willing to apply that knowledge in their jobs in making decisions and accomplishing tasks for the company; a relatively permanent change in human capabilities that does not result from growth processes.

lecture A training method in which the trainer communicates through spoken words what trainees are supposed to learn.

logic model The process used to identify the relationship between training resources, training activities, and program outcomes.

logical verification Perceiving a relationship between a new task and a task that has already been mastered.

machine learning Artificial intelligence systems that learn.

maintenance The process of continuing to use newly acquired capabilities over time.

Malcolm Baldrige National Quality Award A national award created in 1987 to recognize U.S. companies' quality achievements and to publicize quality strategies.

managing diversity, equity, and inclusion The creation of an environment that allows all employees (regardless of their demographic group) to contribute to organizational goals and experience personal growth.

massed practice A training approach in which trainees practice a task continuously without resting.

massive open online courses (MOOCs) Learning that is designed to enroll a large number of learners (massive); is free and accessible to anyone with an Internet connection (open); takes place online using videos of lectures and interactive coursework, including discussion groups and wikis (online); and has specific start and completion dates, quizzes and assessments, and exams (courses).

mental requirements The degree to which a person must use or demonstrate mental skills or cognitive skills or abilities to perform a task.

mentor An experienced, productive senior employee who helps develop a less experienced employee (a protégé).

metacognition A learning strategy whereby trainees direct their attention to their own learning process.

metrics Business-level outcomes chosen to measure the overall value of training or learning initiatives.

microblogs Software tools such as Twitter that enable communications in short bursts of text, links, and multimedia either through stand-alone applications or through online communities or social networks. Also called *microsharing*.

microcredentials A competency-based and skill-focused form of credential that demonstrates skills, knowledge, and experience in a given subject area or capability.

microlearning Training delivered in small pieces or chunks designed to engage trainees, motivate them to learn, and help facilitate retention.

microsharing Software tools such as Twitter that enable communications in short bursts of text, links, and multimedia either through stand-alone applications or through online communities or social networks. Also called *microblogs*.

mission A company's long-term reason for existing.

mobile learning Refers to informal or formal learning delivered using a mobile device such as a smartphone, netbook, notebook computer, or i-Pad.

mobile learning Training that provides trainees with anytime and anywhere access to instructional resources such as videos, pdfs, games, or courses.

modeling display A training method in which trainees are shown key behaviors, which they then practice; often done by videotape or computer.

modeling Having employees who have mastered the desired learning outcomes demonstrate them for trainees.

motivation to learn A trainee's desire to learn the content of a training program.

motor skills Coordination of physical movements.

Myers-Briggs Type Inventory (MBTI) A psychological test for employee development consisting of over 100 questions about how the person feels or prefers to behave in different situations.

near transfer A trainee's ability to apply learned capabilities exactly to the work situation.

need A deficiency that a person is experiencing at any point in time.

needs assessment The process used to determine if training is necessary; the first step in the Instructional System Design (ISD) model.

Net Promoter Score (NPS) A score designed to measure satisfaction with a training course by asking trainees to rate the likelihood of recommending it to a peer by using a 0–10 point scale.

neurodiversity Natural and valuable variations in brain function and behavior, which affect how individuals process information and interact with others.

nine-box grid A three-by-three matrix used by groups of managers and executives to compare employees within one department, function, division, or the entire company for analysis and discussion of talent, to help formulate effective development plans and activities, and to identify talented employees who can be groomed for top-level management positions in the company.

nontraditional employment The use of independent contractors, freelancers, on-call workers, temporary workers, and contract company workers.

nontraditional employment The use of independent contractors, freelancers, on-call workers, temporary workers, and contract company workers.

norms Accepted standards of behavior for work-group members.

objective The purpose and expected outcome of training activities.

offshoring The process of moving jobs from the United States to other locations in the world.

on-the-job training (OJT) Training in which new or inexperienced employees learn through first observing peers or managers performing a job and then trying to imitate their behavior.

onboarding The orientation process for newly hired managers.

online learning Instruction and delivery of training by computer online through the Internet or web. Also called *e-learning*.

open skills Training objectives linked to general learning principles.

opportunity to perform The chance to use learned capabilities.

organizational analysis A training analysis that determines the appropriateness of training, considering the context in which training will occur.

organizing A learning strategy that requires the learner to find similarities and themes in training materials.

orientation An event in which employees receive information about their job, the company, work rules, and travel reimbursement, complete tax forms, and learn how to complete time sheets.

other In task analysis, a term referring to the conditions under which tasks are performed; for example, the physical condition of the work environment or psychological conditions, such as pressure or stress.

output A job's performance standards.

outsourcing The acquisition of training and development activities from outside a company.

overall task complexity The degree to which a task requires a number of distinct behaviors, the number of choices involved in performing the task, and the degree of uncertainty in performing the task.

overlearning Employees' continuing to practice even if they have been able to perform the objective several times.

part practice A training approach in which each objective or task is practiced individually as soon as it is introduced in a training program.

past accomplishments A system of allowing employees to build a history of successful accomplishments.

peer mentoring program A program in which a successful senior employee is paired with a group of four to six less experienced protégés to help them understand the organization, guide them in analyzing their experiences, and help them clarify career directions. Also called *group mentoring program*.

perception The ability to organize a message from the environment so that it can be processed and acted upon.

performance appraisal The process of measuring an employee's performance.

performance orientation Learners who focus on task performance and how they compare to others.

person analysis Training analysis that involves (1) determining whether performance deficiencies result from lack of knowledge, skill, or ability or from a motivational or work-design problem, (2) identifying who needs training, and (3) determining employees' readiness for training.

person characteristics An employee's knowledge, skill, ability, behavior, or attitudes.

persona A summary of the typical characteristics of the trainees including preferences, background, values, career aspirations, traditional demographic information, and training content and delivery preferences.

phased retirement A phase during which older employees gradually reduce their hours, which helps them transition into retirement.

physical requirements The degree to which a person must use or demonstrate physical skills and abilities to perform and complete a task.

pilot testing The process of previewing a training program with potential trainees and managers or other customers.

plug-in Extra software that needs to be loaded on a computer, for example, to listen to sound or watch video.

podcast Audio or video program content distributed in episodes using software.

post-test only An evaluation design in which only post-training outcomes are collected.

post-training measure A measure of outcomes taken after training.

power The ability to influence others.

practicality The ease with which outcome measures can be collected.

practice An employee's demonstration of a learned capability; the physical or mental rehearsal of a task, knowledge, or skill to achieve proficiency in performing the task or skill or demonstrating the knowledge.

preretirement socialization The process of helping employees prepare for exit from work.

presence In training, the perception of actually being in a particular environment.

presentation methods Training methods in which trainees are passive recipients of information.

pretest/post-test with comparison group An evaluation design that includes trainees and a comparison group. Both pretraining and post-training outcome measures are collected.

pretest/post-test An evaluation design in which both pretraining and post-training outcome measures are collected.

pretraining measure A baseline measure of outcomes.

program design The organization and coordination of a training program.

project management The skills needed to manage a team of people and resources to create a learning solution.

promotion An advancement into a position with greater challenges, more responsibility, and more authority than the previous job provided; usually includes a pay increase as well.

protean career A career that is frequently changing based on changes in the person's interests, abilities, and values as well as changes in the work environment.

psychological success A feeling of pride and accomplishment that comes from achieving life goals.

psychosocial support Serving as a friend and role model to an employee; also includes providing positive regard, acceptance, and an outlet for the protégé to talk about anxieties and fears.

random assignment The assignment of employees to training or a comparison group on the basis of chance.

rapid instructional design (RID) A group of techniques that allow training to be built more quickly; the two principles of RID are that instructional content and process can be developed independently of each other and that resources devoted to design and delivery of instruction can be reallocated as appropriate.

rapid needs assessment A needs assessment that is done quickly and accurately but without sacrificing the quality of the process or the outcomes.

rapid prototyping An iterative process used in designing e-learning in which initial design ideas are proposed and provided in rough form in an online working prototype that is reviewed and refined by design team members.

reaction outcomes A trainee's perceptions of a training program, including perceptions of the facilities, trainers, and content.

readability Written materials' level of difficulty.

readiness for training The condition of (1) employees having the personal characteristics necessary to learn program content and apply it on the job, and (2) the work environment facilitating learning and not interfering with performance.

reality check The information employees receive about how the company evaluates their skills and knowledge and where they fit into the company's plans (potential promotion opportunities, lateral moves).

reasonable accommodation In terms of the Americans with Disabilities Act (ADA) and training, making training facilities readily accessible to and usable by individuals with disabilities; may also include modifying instructional media, adjusting training policies, and providing trainees with readers or interpreters.

reflection Trainees spend a short amount of time, such as fifteen minutes, reviewing and writing about what they learned and how they performed.

rehearsal A learning strategy focusing on learning through repetition (memorization).

reinforcement theory A theory emphasizing that people are motivated to perform or avoid certain behaviors because of past outcomes that have resulted from those behaviors.

reliability The degree to which outcomes can be measured consistently over time.

repatriation Preparing expatriates for return to the parent company and country from a foreign assignment.

repurposing Directly translating a training program that uses a traditional training method onto the web.

request for proposal (RFP) A document that outlines for potential vendors and consultants the requirements for winning and fulfilling a contract with a company.

resistance to change Managers' and/or employees' unwillingness to change.

reskilling Employees acquiring new knowledge or skills.

results Outcomes used to determine a training program's payoff.

retirement The leaving of a job and work role to make the transition into life without work.

retrieval The identification of learned material in long-term memory and use of it to influence performance.

return on expectations (ROE) The process through which evaluation demonstrates to key business stakeholders, such as top-level managers, that their expectations about training have been satisfied.

return on investment (ROI) A comparison of a training program's monetary benefits and costs.

reversal A time period in which training participants no longer receive training intervention.

reverse mentoring Mentoring relationship in which a younger employee with less experience mentors a more senior employee.

role play A training exercise in which the participant takes the part or role of a manager or some other employee; training method in which trainees are given information about a situation and act out characters assigned to them.

role play A training exercise in which the participant takes the part or role of a manager or some other employee; training method in which trainees are given information about a situation and act out characters assigned to them.

root cause analysis The process of determining whether training is the best or most likely solution to a performance problem or gap.

sabbatical A leave of absence from the company to renew or develop skills.

scenario-based training Training that places team members in a realistic context while learning.

School-to-Work Opportunities Act A federal law designed to assist states in building school-to-work systems that prepare students for high-skill, high-wage jobs or future education.

sector partnerships Government agencies and industry trade groups that help identify the skills that local employers require and work with community colleges, universities, and other educational institutions to provide qualified employees.

self-assessment An employee's use of information to determine career interests, values, aptitudes, and behavioral tendencies.

self-directed learning Training in which employees take responsibility for all aspects of their learning (e.g., when it occurs, who is involved).

self-efficacy Employees' belief that they can perform their job or learn the content of a training program successfully.

self-evaluation Learners' estimates of how much they know or have learned from training.

self-management A person's attempt to control certain aspects of his or her decision making and behavior.

self-regulation Learners' involvement with the training material and assessing their progress toward learning.

semantic encoding The actual coding process of incoming memory.

serious games Games in which the training content is turned into a game but has business objectives.

shared media Audio or video such as YouTube that can be accessed and shared with others.

simulation A training method that represents a real-life situation, with trainees' decisions resulting in outcomes that mirror what would happen if they were on the job.

situational constraints Work environment characteristics that include lack of proper equipment, materials, supplies, budgetary support, and time.

Six Sigma process A process of measuring, analyzing, improving, and then controlling processes once they have been brought within the Six Sigma quality tolerances or standards.

skill-based outcomes Outcomes used to assess the level of technical or motor skills or behavior; outcomes include skill acquisition or learning and on-the-job use of skills.

skill Competency in performing a task.

social capital The value of relationships among employees within a company.

social learning theory A theory emphasizing that people learn by observing other persons (models) who they believe are credible and knowledgeable.

social media Online and mobile technology used to create interactive communications and allow the creation and exchange of user-generated content.

Social support The degree to which trainees' managers emphasize the importance of attending training, stress the application of training content to the job, and provide opportunities for trainees to use what they learned on the job.

Solomon four-group An evaluation design combining the pretest/post-test comparison group and the post-test-only control group designs.

spaced practice A training approach in which trainees are given rest intervals within the practice session.

staffing strategy A company's decisions regarding where to find employees, how to select them, and the mix of employee skills and statuses.

stakeholders Company leaders, top-level managers, mid-level managers, trainers, and employees who are end users of learning who have an interest in training and development and whose support is important for determining its success (or failure).

STEM skills Science, technology, engineering, and math skills that U.S. employers need and value, but employees lack.

stimulus generalization approach Transfer of training occurs when the training emphasizes the most important features of a task or general principles that can be used to solve a task or complete a problem.

storyboard A group of pictures created using pencil-and-paper or markers on notebooks, erasable marker boards, flip charts, or PowerPoint slides that tell a story.

strategic choice The strategy believed to be the best alternative to achieve the company's goals.

strategic training and development initiatives Learning-related actions that a company takes to achieve its business strategy.

strategic value Employees' potential to improve company effectiveness and efficiency.

Strengthening Career and Technical Education for the 21st Century Act Focuses on ensuring that all students can benefit from career and technical education to prepare them for employment.

stretch assignment Job assignment that helps employees develop because there is a mismatch between the employee's skills and past experiences and the skills required for success on the job.

subject-matter expert (SME) A person who knows a great deal about (1) training issues, (2) the knowledge, skills, and abilities required for task performance, (3) necessary equipment, and (4) the conditions under which tasks have to be performed.

success cases or stories Concrete examples of the impact of training that show how learning leads to results that the company finds worthwhile and the managers find credible.

succession planning The process of identifying and tracking high-potential employees for advancement in a company.

summative evaluation Evaluation conducted to determine the extent to which trainees have changed as a result of participating in a training program.

support network A group of two or more trainees who agree to meet and discuss their progress in using learned capabilities on the job.

survivor An employee remaining with a company after downsizing.

SWOT analysis An identification of a company's operating environment as well as an internal analysis of its strengths and weaknesses. SWOT is an acronym for Strengths, Weaknesses, Opportunities, and Threats.

synchronous communication Communication in which trainers, experts, and learners interact with each other live and in real time in the same way that they would in face-to-face classroom instruction.

tacit knowledge Personal knowledge that is based on individual experience and that is difficult to explain to others.

talent management The process of attracting, retaining, developing, and motivating highly skilled employees and managers.

task analysis Training analysis that involves identifying the tasks and knowledge, skills, and behaviors that need to be emphasized in training for employees to complete their tasks.

task redefinition Changes in managers' and/or employees' roles and methods.

task A statement of an employee's work activity in a specific job.

team leader training Training that a team manager or facilitator receives.

team training A training method that involves coordinating the performances of individuals who work together to achieve a common goal.

team Two or more people with specific roles or functions who work together with shared responsibility to achieve a common goal, mission, or to complete tasks.

telecommuting Working in a remote location (distant from a central office), where the employee has limited contact with peers but can communicate electronically (also called *teleworking*).

teleconferencing The synchronous exchange of audio, video, and/or text between two or more individuals or groups at two or more locations.

telepresence A technology that allows a person to interact in a different place as if they were there.

temporary assignment Employees taking on a position or project to help them increase their skills, gain a new perspective, or determine if they are interested in working in a new role.

terminal learning objective The trainees' expected level of performance, skills, competencies, or knowledge that they can apply on the job.

theory of identical elements Theory that proposes transfer of training occurs when what is being learned in training is identical to the tasks the trainee has to perform on the job.

threats to validity Factors that lead one to question either (1) the believability of a study's results or (2) the extent to which evaluation results are generalizable to other groups of trainees and situations.

time series An evaluation design in which training outcomes are collected at periodic intervals pre- and post-training.

Tin Can API A specification for learning technology that makes it possible to collect data about an employee's or a team's online and face-to-face learning experiences. Also called *Experience API*.

Title VII of the Civil Rights Act of 1964 Legislation that makes it illegal to deny access to employment or deprive a person of employment because of the person's race, color, religion, gender, or national origin.

Total Quality Management (TQM) A style of doing business that relies on the talents and capabilities of both labor and management to build and provide high-quality products and services and continuously improve them.

traditional training methods Training methods that require an instructor or facilitator and involve face-to-face interaction between trainees.

trainee prerequisites Preparation, basic skills, or knowledge that the trainee needs prior to participating in the program.

training administration Coordination of activities before, during, and after a training program.

training context The physical, intellectual, and emotional environment in which training occurs.

training design process A systematic approach to developing training programs. Its seven steps include conducting needs assessment, ensuring employees' readiness for training, creating a learning environment, ensuring transfer of training, developing an evaluation plan, selecting training methods, and evaluating training programs.

training effectiveness The benefits that a company and its trainees receive from training.

training evaluation The process of collecting the outcomes needed to determine whether training has been effective.

training outcomes Measures that a company and its trainer use to evaluate training programs. Also called *criteria*.

training site The place where training is conducted.

training A company's planned effort to facilitate employees' learning of job-related competencies.

transfer of training Trainees' applying to their jobs the learned capabilities gained in training.

transfer Giving an employee a different job assignment in a different area of the company.

tuition reimbursement The practice of reimbursing employees the costs for college and university courses and degree programs.

unconscious bias A judgment outside of our consciousness that affects decisions based on background, culture, and personal experience.

Uniformed Services Employment and Reemployment Rights Act An act that covers deployed employees' rights, such as guaranteeing jobs when they return, except under special circumstances.

uniqueness The extent to which employees are rare and specialized and not highly available in the labor market.

upskilling Employees improving or expanding their current skills.

upward feedback An appraisal process involving the collection of subordinates' evaluations of managers' behaviors or skills.

utility analysis A cost-benefit analysis method that involves assessing the dollar value of training based on estimates of the difference in job performance between trained and untrained employees, the number of individuals trained, the length of time a training program is expected to influence performance, and the variability in job performance in the untrained group of employees.

valence The value that a person places on an outcome.

values Principles and virtues that symbolize the company's beliefs.

verbal information Names or labels, facts, and bodies of knowledge.

verbal persuasion Offering words of encouragement to convince others that they can learn.

vicarious reinforcement A situation in which a trainee sees an example of someone being reinforced for using certain behaviors.

virtual classroom Using a computer and the Internet to distribute instructor-led training to geographically dispersed employees.

virtual reality (VR) A computer-based technology often used in simulations that provides trainees with a three-dimensional learning experience that approximates reality.

virtual team A team that is separated by time, geographic distance, culture, and/or organizational boundaries and that relies almost exclusively on technology to interact and complete projects.

virtual worlds Computer-based, simulated online three-dimensional representations of the real world where learning programs can be hosted.

vision The picture of the future that a company wants to achieve.

volunteer assignment Employees develop their skills through serving the community by taking positions in community organizations.

Web 2.0 User-created social networking features on the Internet, including blogs, wikis, and microblogs, such as Twitter.

Web 3.0 Technologies including artificial intelligence, machine learning, training content accessed by multiple devices all connected to the internet, and the ability to share and access content using web searches based on natural language rather than keywords, symbols, or numbers.

web conferencing Classroom instructions that are provided online through live broadcasts.

web-based training Training delivered on public or private computer networks and displayed by a web browser (also called *Internet-based training*).

whole practice A training approach in which all tasks or objectives are practiced at the same time.

wiki A website that allows many users to create, edit, and update content and share knowledge.

work team A group of employees with various skills who interact to assemble a product or produce a service.

work-life balance Helping employees deal with the stresses, strains, and conflicts related to trying to balance work and nonwork demands.

workforce analytics The practice of using quantitative methods and scientific methods to analyze data from human resource databases, corporate financial statements, employee surveys, and other data sources to make evidence-based decisions and show that human resource practices (including training, development, and learning) influence important company metrics.

Workforce Innovation and Opportunity Act (WIOA) A 2014 federal law that created a new, comprehensive workforce investment system that is customer focused, that provides Americans with career management information and high-quality services, and that helps match U.S. companies with skilled workers.

working storage The rehearsal and repetition of information, allowing it to be coded for memory.

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