Chapter 8

Training and Development

OBJECTIVES

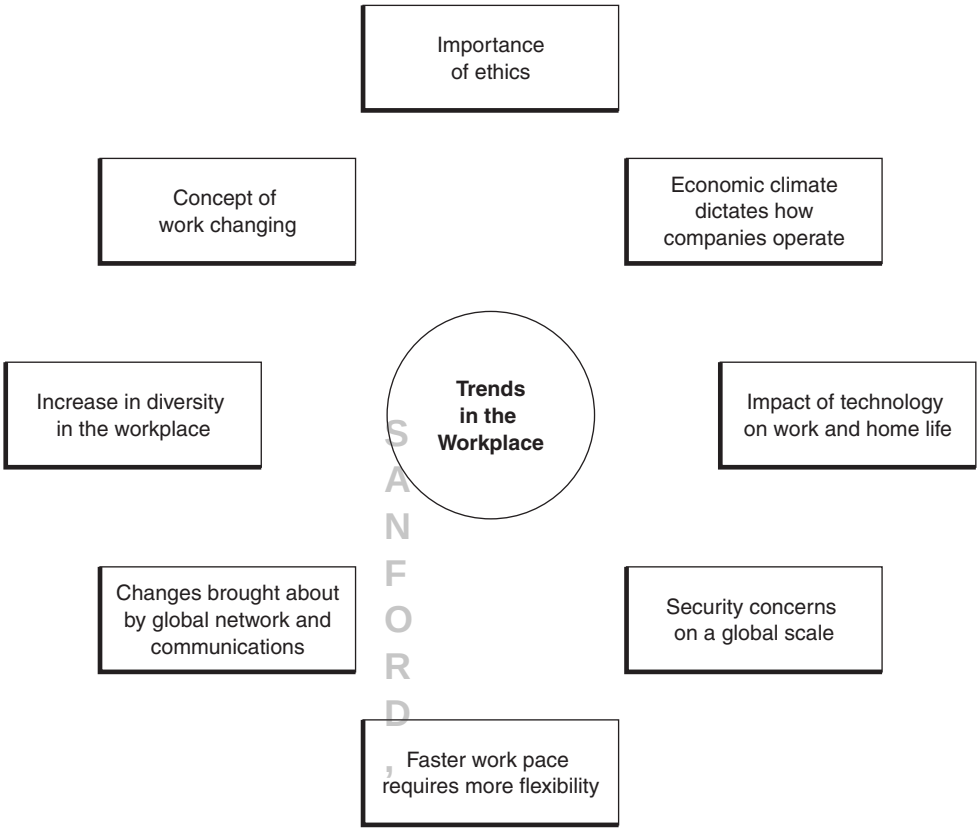
After reading this chapter, you should be able to

1. Define what is meant by training and explain why it is a critical function for corporations today.
2. Explain how to conduct a needs assessment, including performing organizational, task, and person analyses and deriving instructional objectives for a training program.
3. Know how to design a training program to facilitate learning.
4. Identify the critical elements related to transfer of training.
5. Compare and contrast the various techniques available for training, including their relative advantages and disadvantages, with particular emphasis on e-learning.
6. Identify criteria used to evaluate training effectiveness.
7. Understand different experimental designs that can be used for evaluating training programs.
8. Understand the components of training programs for employee orientation and onboarding, teamwork, generational issues, diversity awareness, sexual harassment, and international assignments.

OVERVIEW

Throughout this book we have referred to the empirical research linking particular human resource practices to corporate financial performance. The last chapter emphasized the critical role of performance measurement and management as characteristics of "high-performance work practices."[1] This same body of research also points to the importance of training and development as contributors to the "bottom line" of corporate performance. Training has evolved substantially in recent years with evidence indicating more organizational investment in training and development. Those leaders who understand how to drive business results in an increasingly competitive, global environment recognize that a better-trained workforce improves performance and that investing in employee learning

Figure 8-1
Trends in the Workplace



and development is critical to achieving success.[2] See Figure 8-1 for current trends in the workplace shaping **human resource development** (HRD) systems. Given the intense pressure to compete, improve quality and customer service, and lower costs, leading American companies have come to view training as a key to organizational survival and success. In fact, *ASTD's 2010 State of the Industry* report noted that despite the uncertain economic conditions affecting companies, there was still a continued dedication to workplace training in firms worldwide. By their investments in learning, executives highlighted their belief that employee learning and development is critical to the survival, recovery, and future growth of their firms.[3] In another review, it was found that "many organizations are more likely to include training solutions as part of a systemwide change to gain competitive advantage."[4]

Employee skill-level a top priority

Many employers throughout the world view the skill level of their workforce as the top priority for planning. According to the Society for Human Resource Management's workplace forecast published in 2011, one of the top 10 trends is global competitiveness and the need for an educated and skilled workforce. This suggests the need for continual training for employees, especially given the fact that large numbers of Baby Boomers are expected to leave the workforce around the same time. As a result, many HR professionals are worried about a skills shortage in the U.S. labor force.[5] Another survey of those firms planning to hire new employees indicated that 39 percent of them said they expected to encounter some difficulty in finding qualified individuals for their new positions. Even though there are several workers available for every open position in the United States, HR professionals are still having trouble finding the *right* people to match the skills required for their job openings.[6]

Training and Fortune's "Best Companies"

Organizations with exceptional training opportunities and programs often make *Fortune* magazine's list of the **"Best Companies to Work For,"** an honor that also translates into financial success. One study found that companies that made *Fortune*'s list had 50 percent less turnover than their peers and returned about three times more money for stockholders.[7]

To become a leading-edge company, a firm will need to be more concerned with the types of programs it uses to improve workplace learning and performance, not simply with how much money it spends on training. A transformation of a firm's training efforts and other practices and systems that support training may be needed. For example, successful firms align their training with high-performance work practices (e.g., self-directed work teams, access to business information), innovative compensation practices (profit sharing, group-based pay), and innovative training practices (e.g., mentoring or coaching programs, training information systems). According to ASTD's 2010 review of the industry, top companies expect their employees to allocate a meaningful amount of time to formal learning and development activities.[8]

Not only must firms invest in the continual learning of workers in order to be competitive, but many companies are providing training to workers who are new to the workforce. Many companies also include an assessment of workforce trainability as part of their analysis for expansion and plant openings. Unfortunately, recent evidence indicates that many U.S. workers are not competing well on the trainability criterion. In 2005, Toyota selected Ontario, Canada, over the United States as the place for a new plant for its mini-SUVs. Toyota chose Canada over several U.S. states offering substantial financial incentives based to some extent on the relative trainability of Ontario's workforce. The president of the Automotive Parts Manufacturers' Association stated that the educational level in parts of the United States was so low that trainers for Japanese plants have to use "pictorials" to teach some illiterate workers how to use high-tech equipment. Other reports support the contention that auto companies with plants in parts of the United States are disappointed in the trainability of the U.S. workforce.[9]

U.S. workers are not competing well on trainability

Many firms provide life training in addition to skills training. When Marriott Hotels hires new workers, it enrolls them in a 6-week training course with classes on hotel duties and self-esteem and stress. At Burger King, basic training for starting restaurant jobs also includes Life 101 (e.g., teaching employees how to balance a checkbook, the importance of getting to work on time). Ecolab established partnerships with welfare-to-work community groups and started a training program at a Wisconsin plant to teach entry-level employees math, basic physics, and blueprint-reading skills.[10]

This chapter provides an overview of employee training. We will discuss the importance of training in the context of the organization's competitive strategy and the need to link training needs with the mission and goals of the organization. You will learn how to design and evaluate a training program and to tailor the training to particular situations.

DEFINING TRAINING AND DEVELOPMENT

Training is defined as any attempt to improve employee performance on a currently held job or one related to it. This usually means changes in specific knowledge, skills, attitudes, or behaviors. To be effective, training should involve a learning experience, be a planned organizational activity, and be designed in response to identified needs. Ideally, training also should be designed to meet the goals of the organization while simultaneously meeting the goals of individual employees. The term *training* is often confused with the term *development*. **Development** refers to learning opportunities designed to help employees grow. Such opportunities do not have to be limited to improving employees' performance on their current jobs. At Ford, for example, a new systems analyst is required to take a course on Ford standards for user manuals. The content of this training is needed to perform the systems analyst job at Ford. The systems analyst, however, also may enroll in a course entitled "Self-Awareness," the content of which is not required on the current job. This situation illustrates the difference between "training" and "development." The focus of "development" is on the long term to help employees prepare for future work demands, while "training" often focuses on the immediate period to help fix any current deficits in employees' skills.

Training should be aligned with strategy

The most effective companies look at training and career development as an integral part of a human resources development (HRD) program carefully aligned with corporate

business strategies. This is a critical factor for those firms rated as ASTD's Best Companies.[11] It is also important for individual employees. In fact, in a survey reported in 2010 by the Corporate Executive Board, 20,000 high-potential employees revealed that being connected to their firm's corporate strategy was top on their list as something that drove or engaged them.[12] During tough economic times, it is especially important for training to be aligned to corporate strategic business objectives. This can be done by (1) aligning efforts with the organizational mission and business goals, (2) using training to address skill gaps, (3) designing job-focused instructional objectives, (4) creating sound training programs that promote learning and transfer to jobs, and (5) collaborating with sponsors and others outside the training department to promote transfer of training to jobs.[13] The **American Society for Training and Development** (ASTD) award winners for the *Very Best Learning Organizations* are those that strike a balance between training and other types of learning efforts (e.g., performance analysis, organizational development, talent management, process improvement). In 2010, the ASTD listed 31 firms that were successful in creating a valuable learning culture despite tough economic times and budget cutbacks. These firms were able to create engaged learning environments, use new ways of delivering learning via social media tools, and create innovative cultures. These included 22 from the United States, 6 from India, 2 based in Turkey, and 1 from Singapore. The top 10 winners included firms from all around the world in diverse industries, such as Intercontinental Hotels Group, Datatel, NIT Technologies Limited (India), University Health System, Yapi ve Kredi Bankasi A.S. (Turkey), Barilla America, Inc., CaridianBCT, Farmers Group, Inc., ESL Federal Credit Union, and Wipro Technologies (India).[14]

EXTENT OF TRAINING AND DEVELOPMENT

ASTD's BEST organizations

In the United States, ASTD estimated that companies spent $125.88 billion on employee learning and development in 2009 with a slight increase in the dollar amount spent on training per employee.[15] In 2009, ASTD's BEST organizations reported an average of 47 hours of learning content for each employee, a 15.9 percent increase from 2008. The BEST award winners were defined as those organizations honored for demonstrating a clear link between learning and performance in their firms. Common characteristics of BEST winning organizations were:

- Evidence that learning has an enterprise-wide role or linkages from the executive team to the organization's strategy.
- Evidence that learning has value in the organization's culture (e.g., learning opportunities for employees, C-level involvement, learning for growth of the organization, and innovation).
- Evidence that learning links to individual and organizational performance (e.g., alignment with the business, efficiency, measurement of the effectiveness of learning, and success with non-training solutions for business needs).
- Evidence of investments in learning and performance initiatives.[16]

The ASTD BEST Award winner Datatel, an information technology and consulting firm, averages about $3,000 per employee annually on training and employees average about 80 hours a year in training. As the chief financial officer, Kevin Boyce, says "our philosophy is to take care of our people. If our people are prepared, knowledgeable, and have the right skills, they will take care of our customers."[17] Farmers Group, Inc., a finance and insurance company, invests upwards of $106,000 to hire, train, and develop new employees in its University of Farmers program, which includes both classroom and online education.[18] Training has been viewed positively among employees. Approximately two-thirds of employees, regardless of age or gender, view the training they have received from their employers to be useful in helping them perform their current job duties. They were less enthusiastic about how well it has prepared them for higher-level jobs (about half were

Figure 8-2
Average Percent of Learning Content for ASTD's Best Award Winners

Learning Content Area	Percentage of all Training
Managerial and supervisory training	13%
Profession or industry-specific training	11%
Processes, procedures, business practices	10%
Mandatory and compliance training	10%
Other (quality, product knowledge)	10%
IT and systems training	7%
Customer service training	7%
New employee orientation	7%
Interpersonal skills training	7%
Sales training	6%
Executive Development	6%
Basic skills training	4%

Source: ASTD 2011 *State of the Industry Report*. www.astd.org.

satisfied). They also viewed the training their employer provided as critical for determining whether or not they would stay with their current firm.[19]

Corporations are offering a variety of training programs to meet their organizational needs. Figure 8-2 lists the most frequent types of learning content offered by ASTD's Best organizations as rated in 2011.[20] The importance of training is likely to continue in the future given recent trends in the workforce. As the United States shifts from manufacturing to service jobs, more workers are needed in service-based industries. In addition, increasing technology demands that current employees enhance their skills and technical sophistication. For example, U.S. Steel (USX) invested money in training for workers so that they would be able to use the new technology they implemented in its production processes. Similarly, Xerox spent about $7 million on its training center to assist its sales staff in gaining additional training to better meet customers' needs for handling documents.[21] Employees at RJR Nabisco who have been confronted with new technology in their jobs are given the option of receiving retraining or early retirement.[22] Employees themselves are asking for additional training in using new technology.[23]

A SYSTEMS VIEW OF TRAINING

Needs assessment phase

Development phase

Evaluation phase

The basic process of training is illustrated in Figure 8-3. Three major steps are involved: assessment, development, and evaluation. The goal of the **assessment** phase is to collect information to determine if training is needed in the organization. If it is needed, it is then important to determine where in the organization it is needed, what kind of training is needed, and what specific knowledge, abilities, skills, or other characteristics (KASOCs) should be taught. This information is collected by conducting three types of analyses: at the organizational, job, and individual levels of analysis. After the information is compiled, objectives for the training program can be derived. The goal of the **development** phase of training is to design the training environment necessary to achieve the objectives. This means trainers must review relevant learning issues, including characteristics of adult learners and learning principles as they apply to the particular training and potential trainees under consideration. Also, trainers must identify or develop training materials and techniques to use in the program. Finally, after the appropriate learning environment is designed or selected, the training is conducted. The goal of the **evaluation** phase is to examine whether the training program has been effective in meeting the stated objectives. The evaluation phase requires the identification and development of criteria, which should include participants' reactions to the training, assessments of what they learned in the training program, measures of their behavior after the training, indicators of organizational results (e.g., changes in productivity data, sales figures, employee turnover, accident rates),

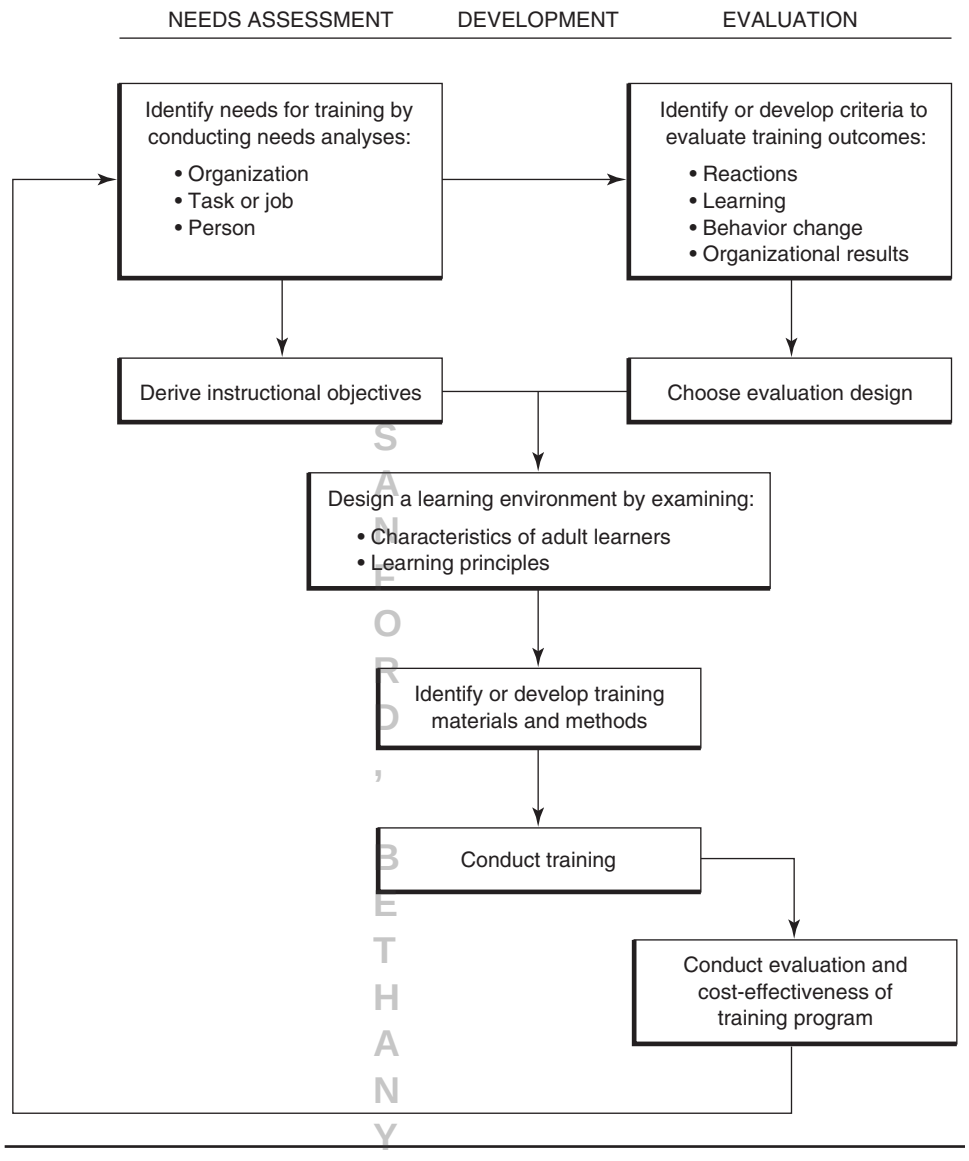


Figure 8-3
A Systems Model of Training

and return on investments (ROI) or, as discussed in Chapter 6, utility analysis. An experimental design is chosen to assess the effectiveness of training. The choices of the criteria and the design are both made *before* training is conducted in order to ensure that training will be properly evaluated. After the training is completed, the program is then evaluated using the criteria and design selected.

Discrepancies between Research and Practice

Research in training is needed now more than ever before as the demand for training increases in organizations.[24] In addition, since much of the literature on training comes from a variety of scientific fields (e.g., industrial and organizational psychology, human resource development, cognitive psychology, anthropology, education, human factors, computer science), it is increasingly important to integrate the findings across those disciplines. Various fields in psychology even define training differently.[25]

Compared to other areas of HRM, practitioners have a fairly strong knowledge of some areas of training research.[26] A recent survey of training processes used in corporate America revealed some discrepancies between the academic recommendations regarding training program development and evaluation and the current state of the practice.[27] While larger companies were more likely to have done **formal needs assessments,** written

Majority of U.S. companies do not do formal needs assessment

specific instructional objectives, and evaluated the training with something other than a simple, post-training reaction questionnaire, the majority of all classes of respondents did none of these things. Small businesses rarely did any of these things as part of their training. Over 60 percent of all surveyed companies, regardless of company size, relied only on trainee reactions to assess the training, taken upon completion of the training, and had no systematic follow-up to further evaluate the training. Less than 10 percent of companies used any form of control group to evaluate the effects of the training. Over 50 percent of companies admitted that managerial training programs were first tried because some other company had been using them. As one training director put it, "A lot of companies buy off-the-shelf training programs just because they had heard or knew that a competitor was using the same training. Shouldn't we expect more data to determine training needs?"

Research findings often ignored

Other scholars also have noted the gaps between research and practice in the training field. Practitioners[28] point out that research findings are often ignored and faddish programs are adopted with little proven utility. In addition, training needs assessments and evaluations are often rare despite their importance, and most training is informal even though this is not the best approach to use.

In order to address some of the gaps between research and practice, the **American Society for Training and Development** has initiated and published its ASTD 2006 Research-to-Practice conference proceedings. In this extensive report, it has included almost 20 articles examining a variety of training issues such as evaluation efforts, learning transfer, and web-based and classroom instruction. The intent of the proceedings was to share knowledge that will affect practice in the field.[29]

NEEDS ASSESSMENT

The first step in training is to determine that a need for training actually exists. An organization should commit its resources to a training activity only if the training can be expected to achieve some organizational goal. The decision to conduct training must be based on the best available data, which are collected by conducting a needs assessment. This needs analysis ideally should be conducted in the context of a **human resource planning (HRP)** program and timely and valid performance data. Companies that implement training programs without conducting a needs assessment may be making errors or spending money unnecessarily. For example, a needs assessment might reveal that less-costly interventions (e.g., personnel selection, a new compensation system, job redesign) could be used instead of training. Despite the importance of conducting needs assessments, few employers conduct such an analysis in the context of their strategic plans or any form of strength, weakness, opportunity, or threat analysis (SWOT analysis).

Three primary types of analysis

A **needs assessment** is a systematic, objective determination of training needs that involves conducting three primary types of analyses. These analyses are used to derive objectives for the training program. The three analyses consist of an **organizational analysis,** a **job analysis,** and a **person analysis.**[30] After compiling the results, objectives for the training program can be derived.

Many trainers suggest that a training need is any discrepancy between what is desired and what exists. Thus one of the goals of the needs assessment is to note any discrepancies. For example, the World Bank determined through a needs assessment that many of its constituents from Eastern Europe required training in transforming state-owned businesses into self-sustaining businesses. The organization contracted with a number of universities to develop and provide the necessary training. Comparisons between the expected level of performance specified (from the job analysis) and the current level of performance exhibited (evident in the person analysis) may indicate performance discrepancies. The Sheraton Corporation, for example, specified that all hotel managers must be familiar with the implications of the 1990 Americans with Disabilities Act (ADA) for hotel operations (see Chapter 3). A test on the law was administered, and scores on the test were used as a basis for identifying those managers who needed training on the implications of the law. Performance discrepancies, however, should not be automatically interpreted as a need for

Performance discrepancies

training. The analyst must determine whether the discrepancy is a skill or knowledge deficiency, thus requiring training. If, however, the required skill is present and performance is still lacking, then the problem may be motivational in nature and thus require some other type of organizational intervention (e.g., new reward or discipline system). One study noted that organizations that conducted needs analyses were better able to use the results in the design and evaluation phases than organizations that did not.[31]

Organizational Analysis

Focus on where training should be placed

An organizational analysis tries to answer the question of *where* the training emphasis should be placed in the company and what factors may affect training. To do this, an examination should be made of the organizational goals, personnel inventories, performance data, and climate and efficiency indexes. This examination should ideally be conducted in the context of the labor supply forecast and gap analysis. Organization system constraints that may hamper the training process also should be explored. Training does not exist in a vacuum, and the context in which it occurs has an impact on whether individuals will learn.[32] Many companies rely on very detailed surveys of the workforce to determine training needs as part of the planning effort. Motorola and IBM, for example, conduct annual surveys that assess particular training needs in the context of the company's short- and long-term goals.

The review of short- and long-term goals of the organization and any trends that may affect these goals is done to channel the training toward specific issues of importance to the firm (e.g., improved customer satisfaction, increased productivity). For example, after Merrill Lynch pleaded guilty to a number of fraudulent business practices, the chief executive officer (CEO) ordered training in business ethics for all employees. To reduce layoffs, IBM retrained hundreds of employees to be sales representatives. Not only was IBM able to minimize layoffs, but the larger sales staff was able to attack another corporate goal: to improve customer satisfaction.

Data from a human resource information system (HRIS) can reveal projected employee mobility, retirements, and turnover. The more sophisticated inventories also can indicate the number of employees in each KASOC or competency group, which can then be compared to what is needed based on the gap analysis of the HR planning process. For example, the Ford Manufacturing Systems Division decided to change to a new programming language for future support work. The first step it took was to determine the extent to which current staff was sufficiently skilled in the new language. The HRIS quickly revealed how many of the staff had at least basic knowledge of and experience with the new language.

A review of climate and performance efficiency data is important to identify problems that could be alleviated with training.[33] Climate indexes are quality-of-work-life indicators and include records on turnover, grievances, absenteeism, productivity, accidents, attitude surveys, employee suggestions, and labor–management data (e.g., strikes, lockouts). Job satisfaction indexes provide data on employee attitudes toward the work itself, supervision, and co-workers. Performance data should be the specific record of important outcomes over a specific period. A record of competency assessment could be useful data as well. Multirater data should be maintained here also. Efficiency indexes consist of costs of labor, materials, and distribution; the quality of the product; downtime; waste; late deliveries; repairs; and equipment utilization. These data are examined to find any discrepancies between desired and actual performance.

It is also important to identify any organization system constraints on training efforts. For example, if the benefits of training are not clear to top management, they may not plan and budget appropriately for training. Consequently, the training program may not be properly designed or implemented. Omni Hotels requires senior executives to attend training programs to ensure that they are supportive of the training that lower-level managers receive. In addition, the training staff makes sure that the training is tailored to Omni so that trainees can more readily see the value of the training.[34]

Organization analysis tests hypotheses regarding training needs

Organizational analysis should test hypotheses about training needs. For example, a retail marketing manager received a complaint from a vendor that the sales staff did not understand the advantages of a particular product. The manager then "mined" the customer survey and complaint database to determine the extent to which product knowledge of the

sales staff was a problem. He was able to determine that the complaint may have been an isolated event. Organizational analysis should be about testing theories of where (and why) training is needed. Complaints about a product or service should be carefully examined to determine the extent and importance of the problems(s) described in the complaints. Of course, data can also be "mined" or collected to determine an optimal way to do things which can then drive training content.

Job Analysis

Focus on what should be taught in training

A job analysis tries to answer the question of *what* should be taught in training so that the trainee can perform the job satisfactorily. As discussed in Chapter 4, a job analysis should document the tasks or duties involved in the job as well as the KASOCs (or competencies) needed to carry out the duties. When conducting a job analysis to determine training needs, both a *worker-oriented* approach, which focuses on identifying behaviors and KASOCs, and a *task-oriented* approach, which describes the work activities performed, should be used. The **critical incident technique (CIT)** is particularly valuable because it provides considerable detail on the job and the consequences of specific work behaviors. A task-oriented approach is beneficial in identifying specific training objectives that are used in curriculum development and program evaluation. Ideally more than one method of job analysis should be used to determine training needs. If interviews or questionnaires are used and discrepancies exist between what a supervisor says is an important job duty and what an employee states, these discrepancies should be resolved before any training programs are designed.[35]

The O*NET is also a very valuable resource for training needs and content for many jobs and job families. Occupations included in the O*NET database describe specific training needs for each occupation. For example, the O*NET analysis for "Advertising and Promotions Managers" describes over 20 tasks that have to be mastered in order to excel in this occupation.

Person Analysis

Focus on who should receive training

A person analysis attempts to answer the question of *who* needs training in the firm and the specific type of training needed. To do this, the performance of individuals, groups, or units on major job functions (taken from the performance appraisal data) or assessments of KASOCs or competencies are compared to the desired levels. Many companies use self-assessments in this process. For example, Ford determined the training needs for a new computer language based on a self-assessment questionnaire distributed to the staff. At the managerial level, many organizations (e.g., IBM, AT&T, Federal Express, the World Bank, and the Federal Aviation Administration) use peers and subordinates to provide performance information about their managers. At Ford, each supervisor is responsible for completing an individual training plan for each subordinate. The plan is developed jointly by the supervisor and the subordinate. The two decide on the courses that should be taken and the time frame for completion. The goal is for each employee to reach a certain level of proficiency considered necessary for current and future tasks. Many organizations in the service sector rely on customers for information about sales personnel. Bloomingdale's, for example, uses "paid" customers to assess the sales techniques of probationary employees. The data are then used to determine the appropriate managerial intervention to take with the employee (e.g., training, discipline, new compensation).

Identify performance discrepancies

Performance discrepancies are used to indicate areas needing attention. It is important to determine whether any discrepancies are due to a lack of KASOCs, which KASOCs are missing, and whether they can be developed in employees through training. Individuals may lack the necessary skills or perceive themselves as lacking the skills (i.e., they may lack confidence in their abilities). In these cases, training may be needed. In other situations, employees may have the skills yet lack the needed motivation to perform, and other action may be called upon (e.g., changes in the reward system, discipline). Employees also can be tested on the desired behaviors using a performance test such as those discussed in Chapter 6. If they can perform the duties satisfactorily, the organization will know that skills training is not required. The U.S. Navy, for example, uses miniature training and testing in order to determine skill level prior to comprehensive training. Pratt & Whitney

and Office Depot are among the many companies that use an assessment center to measure supervisory skills judged to be critical based on its goals. Person analysis can also be used to assess trainability—whether the individual is capable of benefiting from the training and who, among candidates, might benefit the most. We discuss *trainability* later in the chapter. Research is clear that individual difference variables such as cognitive ability and motivation to learn are related to trainability and the extent to which someone will learn.[36]

Techniques for Collecting Needs Assessment Data

A variety of techniques have been suggested for conducting a needs assessment and for collecting data to use in the organizational, job, and person analyses. Figure 8-4 lists these techniques. Some techniques (e.g., work sampling) can be used for more than one type of analysis. Thus efforts to coordinate and integrate results are recommended.

Deriving Instructional Objectives

After completing the three types of analyses in the needs assessment, the training professional should begin to develop instructional or learning objectives for the performance discrepancies identified. Instructional objectives describe the performance you want trainees to be able to exhibit. Well-written learning objectives should contain observable actions (e.g., time on target; error rate for things that can be identified, ordered, or charted), measurable criteria (e.g., percentage correct), and the conditions of performance (e.g., specification as to when the behavior should occur). ESL Federal Credit Union, one of ASTD's Best organizations, has SMEs (subject matter experts) help to identify strategic objectives and then create training objectives.

Some sample learning objectives for a training program with sales employees are

- After training, the employee will be able to smile at all customers even when exhausted or ill, unless the customer is irate.
- After training, the employee will be able to calculate markdowns on all sales merchandise (e.g., 30 percent markdown) correctly 100 percent of the time.

Advantages of deriving objectives

Although training programs can be developed without deriving learning objectives, there are several advantages to developing them. First, the process of defining learning objectives helps the trainer identify criteria for evaluating training programs. For example, specifying an instructional objective of a 20 percent reduction in waste reveals that measures of waste may be important indicators of program effectiveness. Second, learning objectives direct trainers to the specific issues and content to focus on. This ensures that trainers are addressing important topics that have been identified through strategic planning. Also, learning objectives guide trainees by specifying what is expected of them at

Figure 8-4 Data Sources Used in Training Needs Assessment

Organizational Analysis	Job/Task Analysis	Person Analysis
Organizational goals and objectives	Job descriptions	Performance appraisal data
HRIS data	Job specifications or task analysis	Work sampling
Skills/competency inventories	Performance standards	Interviews
Organizational climate indexes	Performing the job	Questionnaires
Efficiency indexes/performance data	Work sampling	Tests (KASOCs)
Changes in systems or subsystems (e.g., equipment)	Reviewing literature on the job	Attitude surveys
	Asking questions about the job	Training progress charts/checklists
Management requests	Training committees/conferences	Assessment centers
Exit interviews	Analysis of operating problems	Critical incidents
Management-by-objectives or work planning systems	O*NET data	Self-efficacy measures

Source: Academy of Management Review by M. L. Moore and P. Dutton. Copyright 1978 by Academy of Management (NY). Reproduced with permission of Academy of Management (NY) in the format Textbook via Copyright Clearance Centre.

the end of training. Finally, specifying objectives makes the training department more accountable and more clearly linked to other human resource activities, which may make the training program easier to sell to line managers.

DEVELOPMENT OF THE TRAINING PROGRAM

After a needs analysis has been conducted and the staff is confident that training is needed to address the performance problem or to advance the firm's strategic mission, the training program is developed. This can be done by an in-house training staff or by outside consultants. Many firms now even design and manage their own corporate training centers. Some of the companies that have their own corporate universities include Toyota, BB&T, Ford, Disney, GE, Union Carbide, IBM, Home Depot, Xerox, Motorola, Phillips Petroleum, McDonald's, Black & Decker, Aetna Life & Casualty, Kodak, and Goodyear Tire & Rubber.[37] To develop the program, the trainer should design a training environment conducive to learning. This can be done by setting up preconditions for learning and arranging the training environment to ensure learning. Following this, the trainer should examine various training methods and techniques to choose the combination most beneficial for accomplishment of the instructional objectives of the training program.

Designing a Learning Environment for Training

To design a training program in which learning will be facilitated, trainers should review the basic principles of how individuals learn. Learning principles should be reviewed and integrated into the design of the training program and materials. Also, issues of how to maximize transfer of new behaviors back to the job should be addressed. Finally, trainers should design their programs to meet the needs of adults as learners, which means understanding how adults best learn. For example, adult learners want to set their own goals for training since they see themselves as capable of self-direction. In addition, they often enjoy experiential learning techniques and self-directed learning more than conventional informational techniques. They are problem-centered and are more receptive to training that enables them to solve problems of particular interest to their situation. They want to be able to apply the training they receive to their day-to-day work experiences and are less interested in the program if they cannot see a direct application to their work situation.[38] Figure 8-5 illustrates how an instructional model can have training implications in order to maximize learning and transfer back to the job.

Preconditions of Learning

Trainees must be ready to learn before they are placed in any training program. To ensure this, trainers should determine whether trainees are **trainable** (i.e., whether they have the ability to learn and are motivated to learn). In addition, trainers should try to gain the support of trainees and their supervisors prior to actually implementing the program.

Trainability

Ability and motivation to learn

Before the learner can benefit from any formal training, he or she must be trainable or ready to learn. This means the trainee must have both the ability and the motivation to learn. To have the ability, the trainee must possess the skills and knowledge prerequisite to mastering the material. One way to determine this is to give trainees a performance test or work sample (i.e., an example of the types of skills to be performed on the job) and measure how quickly they are able to learn the material or how well they are able to perform the skills. Assessing trainees' ability to learn is of increasing concern to corporate America. In view of the increasing technological knowledge required in most jobs, many Americans are not being educated at a level compatible with the requirements of most entry-level jobs. This situation appears to be getting worse in the United States since the entry-level jobs of the future are being "up-skilled" while the pool of qualified workers is shrinking.

It has been estimated that over 30 million workers in the United States are functionally illiterate, meaning that they cannot read or write well enough to perform their job duties.

Figure 8-5 A Summary of Merrill's First Principles of Instruction and Training Implications

Merrill's First Principles of Instruction	Training Implications
Learning is promoted when learners are engaged in solving real-world problems	• Ensure that the problems addressed in the training correspond to real-world tasks in the organization • Increase task complexity and diversity over multiple lessons to ensure that trainees have experienced an adequate sampling of task-based experience
Learning is promoted when existing knowledge is activated as a foundation for new knowledge	• Relate what trainees know about organizational mission and objectives to the training they will complete • Relate the skill and knowledge trainees will master to what they already know about their jobs • Inform trainees that the skills, knowledge, and thought processes they will build during training are like those that exemplary performers use to perform their jobs
Learning is promoted when new knowledge is demonstrated to the learner	• Employ examples for concept learning, procedural demonstrations, process visualizations, and behavior modeling depicting what exemplary performers actually think and do on the job • Draw attention to any mental models that support situational interpretations, decision making, or problem solving on the job • Point out relevant similarities and differences across multiple demonstrations
Learning is promoted when new knowledge is applied by the learner	• Provide enough authentic job-based practice to master the instructional objectives and exemplary performance on the job • Provide coaching and immediate feedback during practice • Build trainees' self-efficacy by letting them know that successful training performance means they can feel confident they can perform the job tasks
Learning is promoted when new knowledge is integrated into the learner's world	• Provide opportunities for trainees to publicly demonstrate their new skills in ways that commit them to applying what they learned on the job • Provide post training opportunities for trainees to continue discussing how they are applying what they learned to their jobs and ways to improve • Provide post training opportunities for managers to monitor and reinforce the application of learned skills on the job

Source: Modified from: Merrill, M. D. (2002). First principles of instruction. *Educational Technology Research and Development, 50*(3), 43–59.

Sun Oil, Campbell Soup, and Digital Equipment work with state and local governments in partnership programs to help address literacy issues among the workforce.[39] Research clearly shows that employees with higher cognitive ability and basic math and reading skills are more trainable.[40]

Learning and individual characteristics

It's not enough that trainees have the ability to learn the skills; they must also have the desire or motivation to learn. Research also finds that employees who are more conscientious, more oriented toward learning, less anxious, and younger are more trainable.[41] One way to assess motivation to learn is to examine how involved they are in their own jobs and career planning. The assumption is that those individuals who are more highly involved will have higher motivation to learn.[42] It is also important to assess the attitudes and expectations of trainees regarding training since their views will most likely affect their reactions to the program and the amount they learn.[43] For example, employees who choose to attend training learn more than those who are required to attend.[44] Some companies link successful completion of training programs and acquired skills with compensation. At Ford, employees must select 40 hours of training from a list of options. An employee must fulfill the 40 hours to qualify for merit pay.

Given the increasing use of distance learning formats, it is also important to assess learners' readiness to participate in online learning. The readiness of learners to enter into distance learning environments may play a critical role in increasing their course-completion and program-retention rates. Thus, a tool, the **E-learning Readiness Self-Assessment,** has been designed to provide a quick, yet comprehensive analysis of preparedness for success in an online training program. It addresses questions about the learner's access to technology, online skills, motivation, online audio, Internet skills, and views about training success.[45]

Gaining the Support of Trainees and Others

If trainees do not see the value of training, they will be unlikely to learn new behaviors or use them on their jobs. Trainees should be informed in advance about the benefits that will result from training. If they see some incentives for training, it may strengthen their

motivation to learn the behaviors, practice them, and remember them. To gain the support of trainees for the training program, the trainer must point out the intrinsic (e.g., personal growth) and extrinsic (e.g., promotion) benefits of attending training.

Supervisory support is critical

In addition to garnering the support of trainees for training, the support of their supervisors, co-workers, and subordinates should be sought. For example, if the trainees' supervisors are not supportive of training, then they may not facilitate the learning process (e.g., allow employees time off for training, reward them for using new skills). Likewise, if their peers or subordinates ridicule them for attending training, they may not be motivated to attend training programs or to learn.[46] Trainers can improve the likelihood of acquiring others' support for training by getting their opinions on the content of training, the location, and the times. At Patapsco Valley Veterinary Hospital located in Ellicott City, Maryland, staff members are consistently asked for their opinions on the most convenient times to hold training sessions. In addition, the owners of the practice set a positive example by attending the training sessions themselves and by rewarding employees for participating in training and using their new skills on the job. At Grant Thornton, one of ASTD's Best firms, the CEO shows support for knowledge sharing by having a blog on the front page of the firm's knowledge sharing platform, "K-Source."

Conditions of the Learning Environment

After ensuring that the preconditions for learning are met, trainers should build a training environment in which learning is maximized. To do this, trainers need to decide how to best arrange the training environment by addressing the issues that follow.

Whole versus Part Learning

Research has shown that when a complex task is to be learned, it should be broken down into its parts if this can be done. Trainees should learn each part separately, starting with the simplest and going on to the most difficult. However, **part learning** should be combined with **whole learning;** that is, trainees should be shown the whole performance so that they know what their final goal is. The training content should be broken down into integrated parts, and each part should be learned until it can be performed accurately. Then a trainee should be allowed to put all the parts together and practice the whole task. One method that combines part and whole learning is called progressive part learning. In this approach, the trainees learn one part, then learn and practice that first part along with a second part, then learn and practice the first and second parts along with a third part, and so on. This might be used if the topics to be taught are somewhat interdependent (e.g., a communications course that involves sessions on active listening, being assertive, using nonverbals).

Massed versus Spaced Practice

Spaced practice is generally more effective

Practice is important for trainees to learn a new skill or behavior. Trainers can observe the practice sessions and provide feedback to the trainees to correct their mistakes. **Spaced** practice (i.e., practicing the new behavior and taking rest periods in between) is more effective than **massed** practice (practicing the new behavior without breaks), especially for motor skills. For example, it would be easier for you to learn how to play golf by having a lesson on putting and then going out to practice putting, rather than learning how to do all of the possible golf shots (e.g., putting, chipping, pitching, driving, etc.) and then going out to play. If a learner has to concentrate for long periods without some rest, learning and retention may suffer. It's a little like cramming for an examination: rapid forgetting sets in very soon. Consequently, spaced practice seems to be more productive for long-term retention and for transfer of learning to the work setting. Of course, it takes longer for spaced practice than for massed practice, so trainees may resist it (e.g., they may be less receptive to attending four half-day workshops than two full-day sessions). On the other hand, tasks that are difficult and complex seem to be mastered and then performed better when massed practice is provided first, followed by briefer (spaced) sessions with more frequent rest periods.[47]

Overlearning

Overlearning (i.e., practicing far beyond the point of performing the task successfully) can be critical in both acquisition and transfer of knowledge and skills. Generally, overlearning increases retention over time, makes the behavior or skill more automatic, increases the quality of the performance during stress, and helps trainees transfer what they have learned back to the job setting.[48] Overlearning is desirable in a program when the task to be learned

Overlearning is recommended when the task will not be immediately practiced

is not likely to be immediately practiced in the work situation and when performance must be maintained during periods of emergency and stress. For example, overlearning skills for driving or flying may be important so that in a crisis situation the individual will be able to quickly remember what actions should be taken. Pat Head Summitt, rated as the top coach (most wins among both men and women coaches) in collegiate basketball, believes in the importance of overlearning, which she calls "discipline." She has had her nationally ranked team, the Tennessee Lady Volunteers, practice their plays over and over again in preparation for critical games.[49] This might be one reason why the Lady Vols have won eight National Basketball Championships!

Goal Setting

Goal setting can help employees improve their performance by directing their attention to specific behaviors that need to be changed. If employees set specific, challenging goals, they can reach higher levels of performance. For example, research has shown that goal setting has led to an average productivity increase of 19 percent.[50] Goal setting improves performance because it affects four mechanisms: (a) it directs and focuses a person's behavior, (b) it increases an individual's effort toward attaining the goal, (c) it encourages an individual to persist toward the goal or work harder and faster to attain it, and (d) it enables an individual to set specific strategies for attaining the goal.[51] Training programs should include specific, yet challenging goals so trainees can reach higher levels of performance or greater mastery of the training material. Trainees should be encouraged to set public goals and to record their accomplishments to ensure greater transfer of their training skills.

19 percent increase in productivity

Knowledge of Results

For trainees to improve performance, they need to receive timely and specific feedback or **knowledge of results.** Feedback serves informational and motivational purposes. It shows trainees any gap between their performance and the desired performance and what particular skills or behaviors they need to correct. Also, it can motivate them to meet their performance goals once they see that they are coming close to accomplishing them. Trainers should build into the training environment opportunities for providing feedback to trainees. For example, the trainer could give pop quizzes to trainees during the session and call out the correct answers. Trainees could then quickly score their work to see how well they are doing in the session and where they need additional learning or practice. Sometimes trainees can provide feedback to one another (e.g., observers can be used in role-plays to provide feedback to role-players).

Attention

Trainers should try to design training programs and materials to ensure that trainees devote attention to them. They can do this by choosing a training environment that is comfortable to trainees (e.g., that has good temperature, lighting, seats, plenty of room, snacks) and free from distractions (phone calls, interruptions from colleagues). This is becoming increasingly more critical and challenging as trainees bring more and more technology (BlackBerry devices, cell phones, iPads, laptops) into the classroom. No matter how motivated trainees are, if the environment is not comfortable to work in, trainees will have difficulty learning. Trainers also should make sure that trainees are familiar with and have accepted the learning objectives. They can do this by asking trainees to describe how accomplishing the objectives will resolve problems on the job. If trainees are able to translate learning objectives into relevant job issues, they may pay more attention to the training sessions.

Attention to objectives

Retention

The ability to retain what is learned is obviously relevant to the effectiveness of a training program. Many factors have been found to increase retention. If the material presented is meaningful to trainees, they should have an easier time understanding and remembering it. Trainers can make the content meaningful by (1) presenting trainees with an overview of what is to be learned so that they will be able to see the overall picture, (2) using examples, concepts, and terms familiar to the trainees (e.g., use medical terms and examples when training doctors and nurses), and (3) organizing the material from simple to complex (teach someone how to serve the ball before you teach him/her strategies in tennis). Retention also can be enhanced by rehearsal or requiring trainees to periodically recall what they have learned through tests. The ideas listed in Figure 8-5 provide some good tips for how to ensure retention.

Rehearsal helps

Using Learning Principles to Develop Training Materials

The learning principles described previously should be considered not only when designing the training environment but also when developing training materials. Any materials used with trainees should be able to stimulate them into learning and remembering the information. To ensure that this occurs, trainers need to make sure that the learning principles are built into their training materials. For example, the materials should provide illustrations and relevant examples to stimulate trainees. In addition, the objectives of the material should be clearly stated and a summary should be provided.[52]

Transfer of Training

The ultimate goal of a training program is that the learning that occurs during training be transferred back to the job. Research strongly supports the view that the post-training climate will affect whether training influences behaviors or results on the job. To maximize transfer, the following suggestions have been offered.[53] These include ideas for before the training is conducted, during the training session itself, and once the employee has returned to the job.

Before Training

1. Align the training program with the organization's needs using competency modeling.
2. Involve supervisors and trainees in the project team.
3. Use sound instructional design theory.
4. Develop application-oriented objectives based on the competency.

During Training

1. Maximize the similarity between the training context and the job context. That is, the training should resemble the job as closely as possible. At GE, for example, the "action-learning" process focuses on real business problems.
2. Require practice of the new behaviors and overlearning in training.
3. Provide realistic work-related tasks.
4. Provide extra spaces in training books to note ideas during training.
5. Include a variety of stimulus situations in the practice so trainees will learn to generalize their knowledge and skills. Many coaches set up grueling basketball schedules with top-ranked teams so that their teams get to play in a variety of situations and be ready for the NCAA playoffs each year.
6. Label or identify the important features of the content to be learned to distinguish the major steps involved.
7. Develop, and have available on the job, job aids to remind employees of the key action steps necessary on the job. For example, Alcoa uses job aids in many of its manufacturing jobs.
8. Make sure that the general principles underlying the specific content are understood in training.
9. Provide opportunity (time) to synthesize material or plan for application. At Lockheed Martin, trainers from the Robert H. Smith School of Business leading the *Executive Leadership Strategies Program* give executives time at the end of each day to synthesize their learning for the day. They also have them present their synthesis for the week-long training at the end of the week, along with an action plan for how they will apply the skills.
10. Build the trainee's **self-efficacy** for learning and using the new skills. Self-efficacy is a feeling of control and accomplishment, the sense that you can control your own destiny. Self-efficacy is related to motivation to learn, which is subsequently related to motivation to transfer the skills. Trainers can use verbal persuasion as one tactic to convince trainees that they can learn the tasks. Self-efficacy has been shown to be related to learning using a sample of Navy warfare officers in midlevel managerial positions. In addition, encourage trainees to develop an action plan including specific measurable goals.[54]

After Training

1. Encourage trainees to practice skills on their jobs in between training sessions. For example, the executive education programs conducted by the Robert H. Smith School of Business for some of its corporate clients (e.g., SAIC, Lockheed Martin) often require "homework assignments" such as customer-value projects, organizational systems projects, and individual leadership development plans in between attendance at sessions. The assignments encourage trainees to apply their new skills in the workplace, using an **action learning model.**
2. Ensure that there is a supportive climate for learning and for transferring new behaviors. This can be done by building managerial support (emotional and financial) for training, providing trainees with the freedom to set personal performance goals, and encouraging risk taking among trainees. One study used 505 supermarket managers from 52 stores and found that the work environment, measured by training climate and learning culture, was directly related to the transfer of trained behaviors.[55] It is also important to encourage peer support since this type of support has been shown to influence transfer of training skills.[56]
3. Have trainees present their new learning to co-workers once they return.
4. Once back on the job, employees should be given opportunities to demonstrate that they can use the new skills. For example, one study of plane mechanics from the Air Force found that after training they were given opportunities to perform only about half of the tasks they learned in training.[57] Likewise, in a study of university employees, it was found that situational constraints (e.g., adequate resources, time) limited the amount that trainees could transfer new skills to the work environment.[58]
5. Encourage continual learning by employees. They should realize that one-time training in an area is not sufficient to maintain effective skills. Retraining also may be needed to update skills.

Relapse Prevention

Sometimes, despite trainers' best efforts to get individuals to transfer what they have learned back to the job, it is difficult for trainees to maintain new behaviors or skills over a long period. They encounter high-risk situations and revert back to their old habits. Most people experience relapses after learning new behaviors. Think about all the times you or someone you know went on a diet or started an exercise program. Perhaps you were quite successful sticking to the plan after attending a training program (e.g., online Weight Watchers). Then, one weekend you go on a trip with friends. Next thing you know you are eating lots of snacks and ignoring your exercise plan. This is a relapse. The same thing often happens to employees after they have attended a training program. For example, a manager learns how to control his temper in training, yet the first time returning back to the job he encounters an irate employee and he screams at the person. **Relapse prevention** is needed to assist trainees.[59] This model emphasizes the learning of a set of self-control and coping strategies when the trainee is faced with high-risk situations.[60]

Employees should be made aware of the relapse process itself by informing them that there are some situations that make it difficult for trainees to use their new behaviors. For example, they may be faced with peers or supervisors who are not supportive of their new skills.[61] They should learn to identify and anticipate high-risk situations they will face when returning from training. They should be instructed on how to cope in these situations. Teaching these issues should increase trainees' **self-efficacy** so that they can effectively use their new training skills back on the job.

Choosing Methods for the Training Program

Training methods can be divided into two categories.

1. Methods that are primarily ***informational*** or transmittal in nature; that is, they use primarily one-way communication in which information is transmitted to the learners.
2. Methods that are ***experiential*** in nature; that is, the learner interacts with the instructor, a computer/simulator, customers, or other trainees to practice the skill.

Some of the major methods, including their uses, benefits, and limitations, are described next and in Figures 8-6 and 8-7. Electronic learning, or e-learning, can be both an informational and an experiential method of training.

Most training programs utilize several training techniques since no one approach is best suited for every purpose. According to the 2010 *State of the Industry* report by ASTD, most of the top 31 firms reported using a mix of various techniques to deliver training. There has also been an increased interest in the use of blended training approaches in organizations. This often means the integration of classroom and e-learning training approaches.[62] For example, Deloitte Touche Tohmatsu has an "Upstream Sales Boot Camp," which uses workshops, virtual learning, and coaching session, as well as a "Client Experience Lab," which is an immersive interactive one-day experience.[63] IBM's international sales training program includes both classroom and **on-the-job training (OJT),** which is given over one year. AMC Theatres uses videotapes, detailed training manuals, and OJT programs to train ushers and concession personnel. To determine which combination of methods to select for a particular training program, a developer should first clearly define the purpose of and the audience for the training. In addition, an assessment of the resources (e.g., staff, budget, materials) available to conduct the training is necessary. It is also important to consider whether the focus will be on skill acquisition, maintenance, or generalization of the skill to other areas. One recent study found that trainees rated as more effective those methods that involved them more. They also preferred more individualized training methods, like one-on-one instruction, and technology-based methods such as computer simulations, multimedia presentations, and computer-assisted programmed instruction.[64]

Experiential methods favored by trainees

At a minimum, the training methods selected should (1) motivate the trainee to learn the new skill, (2) illustrate the desired skills to be learned, (3) be consistent with the

Figure 8-6 Informational Training Methods

Uses	Benefits	Limitations
LECTURE		
Gaining new knowledge	Equally good as programmed instruction and television	Learners are passive
To present introductory material	Low cost	Poor transfer
	Reaches a large audience at one time	Depends on the lecturer's ability
	Audience is often comfortable with it	Is not tailored to individual trainees
AUDIOVISUALS		
Gaining new knowledge	Can reach a large audience at one time	Is not tailored to individual trainees
Gaining attention	Allows for replays	Must be updated
	Versatility	Passive learners
	Can reduce trainer, travel, and facility costs	
INDEPENDENT STUDY		
Gaining new knowledge	Allows trainees to go at their own pace	Expensive to develop a library of materials
Completing degree requirements	Minimizes trainers' time	Materials must be designed to adjust to varying reading levels
Continuous education	Minimizes costs of development	Performance depends on trainee's motivation
		Is not applicable for all jobs
E-LEARNING		
Gaining new knowledge	Convenient	Expensive to develop
Pretraining preparation to ensure that all trainees have similar backgrounds	Allows trainees to go at their own pace	Is not easily applicable for all tasks (e.g., cognitive tasks, verbal, psychomotor)
	Can guarantee mastery at a specified level	Does not lead to higher performance than lectures
	Encourages active trainee involvement	
	Provides immediate feedback to trainees	

Figure 8-7 Experiential Training Methods

Uses	Benefits	Limitations
ON-THE-JOB TRAINING		
Learning job skills	Good transfer	Depends on the trainers' skills and willingness
Apprenticeship training	Limited trainer costs	May be costly due to lost production and mistakes
Job rotation	High trainee motivation	May have frequent interruptions on the job
		Often is haphazardly done
		Trainees may learn bad habits
E-LEARNING		
Gaining new knowledge	Self-paced	Trainees may have difficulties with computers
Drill and practice	Standardization over time	Limited interactions for trainees
Individualized training	Feedback given	Less useful for training interpersonal skills or psychomotor tasks
	Convenient	
	Can reduce costs	
EQUIPMENT SIMULATORS		
To reproduce real-world conditions	Effective for learning and transfer	Costly to develop
For physical and cognitive skills	Can practice most of the job skills	Requires good fidelity
For team training		
GAMES AND SIMULATIONS		
Decision-making skills	Resembles the job tasks	Highly competitive
Management training	Provides feedback	Time-consuming
Interpersonal skills	Presents realistic challenges	May stifle creativity
CASE STUDY OR ANALYSIS		
Decision-making skills	Decision-making practice	Must be updated
Analytical skills	Real-world training materials	Trainers often dominate discussions
Communication skills	Active learning	
To illustrate diversity of solutions	Problem-solving practice	
ROLE-PLAYING		
For changing attitudes	Gains experience of other roles	Initial resistance of trainees
To practice skills	Active learning	May not take it seriously
To analyze interpersonal problems	Close to reality	
BEHAVIORAL MODELING		
To teach interpersonal skills	Allows practice	Time-consuming
To teach cognitive skills	Provides feedback	May be costly to develop
To teach training/teaching skills	Retention is improved	
	Strong research evidence	
SENSITIVITY TRAINING		
To enhance self-awareness	Can improve self-concept	May be threatening
To allow trainees to see how others see them	Can reduce prejudice	May have limited generalizability
	Can change interpersonal behaviors	

Use multiple methods

content (e.g., use an interactive approach to teach interpersonal skills), (4) allow for active participation by the trainees to fit with the adult learning model, (5) provide opportunities for practice and overlearning, (6) provide feedback on performance during training, (7) be structured from simple to complex, (8) encourage positive transfer from the training to the job, and (9) be cost effective. In many cases, trainers will use different techniques. For example, teaching supervisors how to give performance feedback may first begin with a lecture or overview of the performance appraisal process, followed by small-group discussions or videotapes depicting effective coaching, and then role-plays to have

supervisors practice their feedback skills. In addition to using multiple methods for training employees, employers should also have numerous ways for employees to enhance their learning. At ASTD's BEST rated firms in 2010, the top 10 tools or approaches being used consisted of: classroom instruction (97.1 percent), assessments (75.2 percent), in-person coaching (71.9 percent), blended learning (e.g., combinations of synchronous and asynchronous classroom and e-learning) (68.5 percent), in-person mentoring (66.3 percent), learning management systems (63.5 percent), asynchronous learning systems such as on-demand modules (63 percent), synchronous learning system (e.g., WebEx, Centra, Adobe Acrobat Connect) (63 percent), courseware authoring tools (e.g., Toolbook Instructor, Adobe Captivate, Trivantis Lectora) (56.5 percent), and rapid development tools (e.g., Articulate Presenter, Toolbook Assistant, PowerPoint conversion tools) (53.9 percent).[65]

Informational Methods

Informational methods are used primarily to teach factual material, skills, or attitudes. Generally, they do not require the trainee to actually experience or practice the material taught during the training session. Some of the more commonly used informational techniques include lectures, audio and video media, and self-directed learning (SDL) methods. E-learning is one of the most popular approaches today.

Lectures

The lecture method is the most commonly used technique for training employees and teaching students. As the 2010 ASTD *State of the Industry* report noted, classroom instruction is not being replaced by emerging technologies and informal learning. In fact, 97 percent of respondents reported that their organizations currently use classroom instruction and less than 1 percent no longer use it. Instead, new technologies supplement classroom instruction.[66] The method is often supplemented with group discussions, audiovisual aids, motion pictures, or television. The approach can also vary in the degree to which discussion is permitted, since some lectures involve all one-way communication, while others may allow trainees to participate by asking questions or providing comments. Despite the criticism of this method, recent research shows that lecture-based training is quite an effective way to facilitate the transfer of theories, concepts, procedures, and other factual material.[67] In addition, a meta-analysis of the effects of lecture, modeling, and active participation on the performance of older trainees found that all three methods had positive effects on learning and skill measures.[68]

Audio and Video Media

A variety of audiovisuals are available to trainers, including films, videos, slides, overheads, audiotapes, flip charts, and chalkboards. Videoconferencing has gained in popularity as costs have become more affordable for employers and different systems have become more compatible. The staff of Greenberg Traurig, an international law firm, set up a videoconference system that is used almost constantly to share information and multimedia presentations in the 375-attorney firm.[69] FedEx Kinko's has videoconferencing facilities available at over 150 U.S. locations,with costs of about $225 per hour.[70] Other firms using videoconferencing include JCPenney, IBM, AT&T, and Texas Instruments. Many firms also use webinars to make workshops available to employees. At Weichert Co., its own university has integrated face-to-face learning with online discussions (webinars) to help train real estate agents.

Podcasting is another popular method to reinforce and promote training to its target audience. It involves recording a portion of audio or video content that is useful and posting it online or on the firm's intranet site and providing a link to download the recording. The use of podcasting has shown some benefits for the training function, including reduced training costs, increased participation, and greater learner engagement. One organization reported being able to deliver its training for $30,000 instead of $125,000 since it reduced the number of training sessions by 50 percent. Another firm was able to get 70 percent participation instead of the usual 40 percent participation by using podcasts for training. Two helpful sites for creating podcasts are: www.freeconference.com and www.audioacrobat.com. Use the first website to get participants' permission to be recorded and the second site to publish your podcast. **Audio Acrobat** generates the appropriate HTML codes for the website, the e-mails, and the downloads. There are both audio and video podcasts that can be used.

Two good websites for creating podcasts

Podcasts will not replace live, in-person training, but they are making it easier for trainees to engage in training on their own schedule, with some of the latest technology, and at a reasonable price.[71]

Self-Directed Learning (SDL) Methods

Several informational methods for training are considered to be SDL approaches because the trainee takes responsibility for learning the necessary knowledge and skills at his or her own pace. A wide range of decisions can be given to the trainee, including the topic of study, objectives, resources, schedule, learning strategy, type and sequence of activities, and media. In most cases, trainees work without direct supervision, set their own pace, and are allowed to choose their own activities, resources, and learning environments. Generally, the training department's role is to provide assistance by establishing learning centers with available materials and by having trained facilitators on hand for questions. Larger companies such as Motorola, Sunoco, and Office Depot have been successful in setting up such centers and encouraging self-directed learning by employees. In these centers, trainees can be given self-assessment tools or instruments.

Advantages of SDL

The advantages of SDL include (1) reduced training time, as compared to more conventional methods (e.g., lecture); (2) more favorable attitudes by trainees compared to conventional techniques; (3) more consistency with an adult learning approach; (4) minimal reliance on instructors or trainers; (5) mobility (i.e., a variety of places can be used for training); (6) flexibility (trainees can learn at their own pace); (7) consistency of the information taught to all trainees; and (8) cost savings. There are also several disadvantages, including (1) high developmental time for course materials and extensive planning requirements, (2) difficulties in revising and updating materials, and (3) limited interactions with peers and trainers.

SDLRS and outcomes

Research indicates that employees with high levels of readiness for SDL as measured by the **Self-Directed Learning Readiness Scale (SDLRS)** were more likely to be higher-level managers, to be outstanding performers,[72] to possess greater creativity,[73] and to have a higher degree of life satisfaction.[74] Also, employees who were outstanding performers in jobs requiring high levels of creativity or problem solving or involving high levels of change were more likely to have high SDLRS scores. In addition, employees with higher SDLRS scores were successful in relatively unstructured learning situations in which more responsibility rests on the learners.[75] A variety of SDL approaches are available. Two of the more commonly used techniques include independent study and various forms of e-learning. **Independent study** requires a trainee to read, synthesize, and remember the contents of written material, audio or videotapes, or other sources of information. The training or personnel department can develop a library of materials for trainees to use in teaching themselves at their own pace various skills or knowledges. Companies such as Coors, Digital Equipment Corporation, Kraft, and U.S. Gypsum utilize extensive self-study materials for their sales employees. Trainees can also design their own training curriculum by opting for correspondence courses or enrolling in independent study courses at local schools or on the web. Generally, in these programs, trainees are required to master the content on their own without direct supervision. Sanofi-aventis is one of the largest pharmaceutical firms and a winner of the 2007 ASTD BEST firms. In addition to classroom training, it has an extensive self-directed learning program consisting of more than 700 courses offered via CD-ROM, textbook, audio CD, DVD, and online. Every employee is encouraged to create an individual development plan, and employees are required to earn continuing professional education hours annually. Trainers have used Brainshark Rapid Learning, an asynchronous development tool, to create online learning objects and to track learners' progress.[76]

E-learning is typically (although not always) an individualized learning method that allows for study of material online. With the proliferation of e-learning, podcasts, and webinars, the control of learning is shifting from the trainer to the learner, although e-learning typically includes both self-paced and instructor-led online learning. According to the ASTD 2010 *State of the Industry* report, the use of e-learning is at its highest level yet, and in 2009, 27.7 percent of all formal learning hours were made available online. Often, a tough economic climate favors the use of e-learning to improve efficiency since trainees can access the material at any time or from any location. UBS uses an e-based program to train new stockbrokers. Best Buy uses e-learning for technical training such as

installing car stereos. Caterpillar has an extensive e-learning program. Intercontinental Hotels Group offers "The Academy," which enables employees to access in-depth e-learning opportunities on key business topics such as finance, coaching, and branded customer experience. ICICI Bank refreshes training by sending daily text-messages to employees' mobile phones.[77]

Most programs build in the important learning principles by (1) specifying what is to be learned (i.e., the behavioral objectives); (2) breaking down the learning topic into small, discrete steps; (3) presenting each step to the trainee and requiring him or her to respond to each step of the learning process (by reading each part); (4) testing the trainees' learning at each step (by responding to questions); (5) providing immediate feedback to the trainee on whether his or her response was correct or incorrect; and (6) testing the level of skill or knowledge acquired at the end of the training module. **E-learning** has replaced "programmed instruction" in training classification but is based on the same principles. One recent study found that web-based instruction was more effective than classroom instruction for teaching declarative knowledge, and was equally effective in teaching procedural knowledge, and trainees were equally satisfied with both methods.

More effective for training "declarative" knowledge

Social Media Technologies for Learning

ASTD's 2011 *State of the Industry* reports indicated that social media technologies are gaining in use for work-related learning (in addition to personal usage). Some of the most common types of social media technologies being used for learning include: shared workspaces (e.g., SharePoint, Google Docs), social networks (e.g., Facebook, LinkedIn), Podcasts, Wikis, Blogs (e.g., Wordpress, LiveJournal), Shared Media (e.g., YouTube, Flickr), Micro-blogs (e.g., Twitter, Yammer), Social bookmarking (e.g., Digg, reddit), Virtual worlds (e.g., Second Life), and Augmented realities (e.g., Layar). They also revealed generational differences in usage of these technologies for work. As expected, younger generations such as Millennials were more likely to use the majority of technologies more often than older generations (Baby Boomers) except for podcasts and virtual worlds. More than 80 percent of respondents also indicated that they expected the use of social media for learning in their organizations to increase over the next 3 years. This is important since Millennials believe that social media are very useful for learning. Farmers Group, Inc., is one firm that has been using social media for its training function. Through its "Agency Insider" program, it allows the trainees to specify how they want to receive the learning, via Twitter, Facebook, e-mail, or RSS feed. Genpact, a business unit within GE located in India, uses a blended learning model including classroom instruction, e-learning courseware, webinars, knowledge portals, and blogs to help employees learn new knowledge and skills.[78]

Online courses rely on a self-directed learning approach and are gaining in popularity with the rise of podcasts, teleconferences, and instant messaging. Online training is a viable alternative to classroom training and is used to teach almost everything. Despite the numerous benefits of online courses, HR professionals should exercise caution when using a web-based format to teach "soft skills." Participants need opportunities to interact and practice to truly learn them. If online courses will be used to teach softer skills, trainers should use a variety of exercises, videos, audios, and graphics so that trainees enjoy the training and are more likely to practice the skills. Trainers should also make sure that the online courses are designed to show how learning will promote success on the job, use peers to support the training, break the skills into concrete learning modules, provide feedback throughout the course, and create opportunities to practice the skills. Some e-learning designers have been working on creating activities that are both interactive and effective and "don't leave learners stuck on autopilot."[79]

Experiential Methods

Experiential methods are often used to teach physical and cognitive skills and abilities. These techniques include OJT, computer-based training (CBT), equipment simulations, games and other simulations, case analyses, role-playing, and behavior modeling. In addition, a variety of electronic training-delivery media and distance learning techniques have become popular as instructional/experiential methods.

On-the-Job Training

Much industrial training is conducted on the job (e.g., at the work site and in the context of the job). Often, it is informal, as when an experienced worker shows a trainee how to perform the job tasks. The trainer may watch over the trainee to provide guidance during practice or learning. For example, sales employees use coaching calls where a senior sales person coaches a new sales employee. Five steps are utilized.[80]

1. Observation of the new employee.
2. Feedback obtained by the new employee.
3. Consensus (i.e., the coach and the new employee arrive at an agreement as to the strengths and weaknesses of the sales call).
4. Rehearsal of a new sales call.
5. Review of the employee's performance.

In 2006, Ruby Tuesday's restaurants introduced a "master's" program. Company leaders attended training and were certified as "burger masters." They then went back to their restaurants to teach their staff to ensure consistency among restaurants. They also opened a culinary arts center, which is dedicated to building a hands-on training experience for all employees from hourly to senior managers. Within the first year, they were able to retain more highly trained staff and turnover was decreased by 20 percent from the previous year.[81]

Although OJT is often associated with the development of new employees, it can also be used to update or broaden the skills of existing employees when new procedures or work methods are introduced. In some cases, the trainer may be a retired employee. For instance, at Corning Glass Works, new employees are paired with retirees for a brief on-the-job introduction regarding the company culture and market data. Following this, they are exposed to formal classroom and field training.[82] Many companies combine OJT with formal classroom training. At McDonald's, after a 3-hour induction, new employees are partnered with a buddy who is a member of the training squad.[83] Dow Chemical alternates sales employees between classroom training at corporate headquarters and OJT experiences in the field for a year. Similarly, Wang Laboratories spends up to 9 months alternating salespeople from company headquarters and field offices. Restaurant employees at the Hard Rock Café are trained by OJT and the use of job aids (i.e., training materials). Workers view this approach very favorably.[84]

Conditions when OJT is best

OJT is best used when one-on-one training is necessary, only a small number (usually fewer than five) of employees need to be trained, classroom instruction is not appropriate, work in progress cannot be interrupted, a certain level of proficiency on a task is needed for certification, and equipment or safety restrictions make other training techniques inappropriate. The training should emphasize equipment or instruments that are to be used as well as safety issues or dangerous processes.

Apprenticeship programs often are considered OJT programs because they involve a substantial amount of OJT, even though they do consist of some off-the-job training. Typically, the trainee follows a prescribed order of coursework and hands-on experience. The Department of Labor regulates apprenticeship programs, and many require a minimum of 144 hours of classroom instruction each year as well as OJT with a skilled employee.[85] Many professions (e.g., medicine) or trades require some type of apprenticeship program that may last anywhere from 2 to 5 years. Some of the most common occupations to offer apprenticeship programs include electricians, carpenters, plumbers, pipe fitters, sheet-metal workers, machinists, tool-and-die makers, roofers, firefighters, bricklayers, cooks, structural-steel workers, painters, operating engineers, correction officers, and mechanics.[86] In Europe, apprenticeships are still one of the most likely ways for individuals to gain entry into skilled jobs, while in the United States only 2 percent of high school graduates enter apprenticeship programs.[87] This is a problem for the U.S. workforce since the pool of qualified skilled labor for future jobs has been shrinking. In France in one apprenticeship program alone, there are currently 4,200 apprentices with the Association des Compagnons du Devoir (elite artisans responsible for restoring historical sites such as Notre Dame Cathedral and Arc de Triomphe). Restricted to men, they begin as young as 15 and undertake up to 9 years of lessons, community chores, and hands-on training with 6,500 companies that have contracts with them. They train for an additional 2 years and

have to complete a personal building project. Only one in 10 typically survives the apprenticeship period and is allowed to join the ranks of Compagnons.[88]

Another commonly used technique for OJT training is **job rotation,** which involves moving employees from one job to another to broaden their experience. Many U.S. companies are showing greater interest in having their employees be able to perform several job functions so that their workforce is more flexible and interchangeable. For example, in the automobile industry today, it is fairly common to see employees being trained on two or more tasks (e.g., painting and welding). This might be done in order to relieve employees' boredom as well as make the company less dependent on specialized workers. GE requires all managerial trainees to participate in an extensive job rotation program in which the trainees must perform all jobs they will eventually supervise. This helps managers develop the broader background required for future managerial positions. At Lockheed Martin, a leadership development program was established for new HR college recruits. They are rotated to a variety of HR departments (recruiting, selection, compensation) to gain broader experiences as HR professionals.

Computer-Based Training (CBT)/E-Learning

SHRM conducted a survey and found that when used effectively, e-learning has been able to deliver training for large numbers of employees at reduced costs and that there was an increased usage of e-learning during an economic downturn.[89] Another study found that web-based instruction was more effective than classroom instruction for teaching declarative knowledge and procedural knowledge. Interestingly, the researchers also noted that trainees were more satisfied with web-based classes that had higher levels of human interaction than lower levels. When trainees were not given the opportunity to interact with others during web-based courses, they preferred classroom instruction.[90] One leading provider of CBT software, CBT Group, has training deals with Cisco Systems, IBM, Informix, Microsoft, Netscape Communications, Novell, Oracle, PeopleSoft, SAP, and Sybase, among others.

Effective computer skill training is vital to organizational productivity. One recent study demonstrated that the behavior modeling approach to computer skill training could be improved by incorporating **symbolic mental rehearsal** (SMR). SMR is a specific form of mental rehearsal that establishes a cognitive link between visual images and symbolic memory codes. The authors recommend that practitioners use SMR for improving the effectiveness of computer skill training.[91]

Chunking refers to chopping computer-based training into its smallest parts and sending them through a network so that learners receive just the instruction they need when they need it. Spring Corporation chunks CBT on the corporate intranet and is one of the leaders in using training over an intranet.[92] The most popular processing software packages (e.g., Microsoft Word) use CBT to introduce learners to the use of the software. The U.S. Armed Forces use CBT extensively for training many of their technicians. In fact, the military and NASA have numerous advanced technologies such as intelligent tutoring systems and virtual reality that are used for training purposes.[93] In some CBT programs, trainees interact directly with computers to actually learn and practice new skills. This is done similarly to the PI system and is called computer-assisted instruction (CAI). For example, Dialect Interactive Lectures (DIALECT) are university lectures that have been converted into multimedia-based digital learning material. DIALECT use animation, computer simulations, and hyperlink facilities to guide students through lectures.[94] CBT has the advantage of being self-paced, standardized, self-sufficient, easily available, and flexible. This is particularly important in today's fast-paced environment, where organizations cannot afford for employees to be away from the job for large amounts of time. In fact, many employees view it as a proven way to save time and money while delivering consistent content.

Electronic training-delivery media involve some of the fastest-growing instructional methods. The latest round of CBT-oriented software offers revolutionary ways in which interactive training is developed and delivered. Multimedia training programs often feature text, graphics, sound, pictures, videos, simulations, and hyper-text links that enable trainees to structure their own learning experiences.[95] The Home Depot delivers training on its more than 40,000 products to employees via the company's web-based training model, a video-driven e-learning experience that consists of 15 minutes of video and synchronized

test, followed by an assessment.[96] Most CBT systems support links to the Internet and to corporate intranets. Internet-based e-learning has emerged as a cost- and time-efficient way to address many companies' training needs. For example, B&W Pantex, a nuclear weapons management site, replaced many of its classroom sessions with computer-based training and quick stand-up meetings by frontline managers. Since 2007, it found that training efficiency improved by 49 percent. Many of ASTD's BEST firms also use online learning in combination with other techniques.[97]

Distance Learning Programs

Online education is the fastest growing sector of the training market. Online learners have gone from 3 million in 2001 to more than 6 million by 2006.[98] Many resources now exist for designing and implementing distance learning programs.[99] In addition, a comprehensive list of vendors is provided by the Distance Education Clearinghouse website (http://www.uwex.edu/disted).

To incorporate a "green" perspective into its training, Tata Consultancy Services Ltd converted its in-house conference to a virtual conference. Employees across 40 locations around the world were able to connect using web-, video, or audio-conferencing facilities. This led to a large increase in participation and a reduction in the conference's carbon footprint and expenses.[100] The Schwan Food Company expanded the educational opportunities it offered to its employees. It contracted with three accredited institutions to create 7-week online modules that help students earn bachelor's degrees in 3 years or less. It also created an associate's degree and an MBA. University Health Systems created an online multicultural sensitivity series that included on-demand video presentations by subject matter experts.[101]

Research on the effectiveness of distance education programs has only begun.[102] In general, offering training or educational programs over the Internet enables employees to access high-quality education at their own pace. They have access to class material, conduct research without traveling, and have dialogs with professors and classmates via e-mail, bulletin boards, and chat rooms. Some programs use videoconferencing or transmit lectures via satellite. In this regard, students may have an easier time juggling careers and families.[103] Numerous organizations have successfully used distance learning programs for their employees, including Ford, AT&T, EDS, MCI Communications, the U.S. Department of Defense, the Tennessee Valley Authority, United Technologies Corporation, Lockheed Martin, and Lucent Technologies.[104] Organizations have reported the following benefits from distance learning programs.[105]

Benefits of distance learning

- A fast, effective way to train global employees.
- Increased the impact and productivity of dollars invested in training and education programs.
- Reduced travel costs and made time formerly spent traveling available for more productive uses.
- Allowed for the training of more people, more often, in sessions that are easier to schedule and coordinate.
- Offered the ability to add students and instructors as needed without incurring significant additional expenses.
- Delivered a consistent message that can be disseminated quickly companywide.
- Provided real-time updates and just-in-time information access.
- Delivered to both work and home sites that are convenient for trainees.
- Offered live interactive programs delivered to multiple networked sites for group learning.
- Is learner-centered and enabled students to have more control over the pacing and sequencing of the learning experience.
- Offered easy access to learning resources.

One article provides a set of research-based principles for "learner control" training in the e-learning environment. "Learner control generally refers to 'a mode of

instruction in which one or more key instructional decisions are delegated to the learner.'" Simply put, trainees have greater control over their training, such as pace, materials covered, and sequence.[106] Figure 8-8 presents guidelines for such more effective e-learning.

Figure 8-8 Guidelines for Learner Controlled Training in e-Learning

PREPARING TRAINEES FOR LEARNER-LED INSTRUCTION

Guideline #1: Understanding Learner Control Is Half the Battle

- Instruct employees about areas they can control and how this increased control can increase learning.
- The perception of control can increase learning.

Guideline #2: Give It Time

- Typical learner-controlled training tasks last from 30 to 60 minutes.
- "Provide trainees with enough time to learn how to use learner control and with suggested completion times for each section of the training task."
- 10 or more separate training sessions are recommended as users become more familiar with the system as time progresses.

Guideline #3: Calibrate Expectations

Ensure trainees understand the training will be challenging. Adult users often perceive learning as an easy process and when confronted with the challenge of training they may become frustrated.

DESIGNING LEARNER-CONTROLLED TRAINING

Guideline #4: Offer Help

- Offer self-tests and feedback so trainees can self-regulate the number of examples to view and the amount of practice items to complete.

Guideline #5: What's Good for One Trainee May Not Be Good for Another

- "Trainees who are high in ability, prior experience, and motivation may benefit the most from learner control."
- "Create programs that provide trainees high in learning ability [also known as 'g'] and prior experience with more learner control options than trainees low in ability and prior experience."
- Motivation: "When trainees are made aware of the organizational objectives of the training they are often more motivated to successfully complete the training program."

Guideline #6: More Isn't Necessarily Better

- Match learner control to the amount of control needed for effective instruction and training objectives.
- Structure training tasks based on trainees' learning preferences.

Guideline #7: "Skipping" Is Better than "Adding"

For optional/additional training material, use the word "skip" additional instruction rather than "add" additional material.

Guideline #8: Keep It Real

Increase meaningfulness of training by using familiar contexts and examples.

Guideline #9: Footprints Help ("You Are Here")

Provide trainees with a "map" to track their training progress.

Guideline #10: Keep Each Instructional Segment Self-Contained

- Each section should be short and concise.
- Trainees should not have to revisit a previous section to complete the current section.

Guideline #11: Share Design Control

- Obtain user preferences from trainees prior to training; for instance, does the user prefer having multiple windows open during the training session?
- "Allow the trainees to stop, pause, or restart the program where they wish."

Guideline #12: Be Consistent

- "Keep the font size and color as well as the background color consistent from one instructional segment to another."

Guideline #13: Create Smooth Transitions

Have clear relationships between training segments.

CREATING WORKPLACE CONDITIONS THAT FACILITATE SUCCESSFUL LEARNER-LED INSTRUCTION

Guideline #14: Promote It

Supervisors can improve learner-controlled effectiveness by setting difficult but attainable goals regarding the level of skill mastery and encouraging the trainees to use their newly obtained skills on the job.

Guideline #15: Make It Matter

Ensure that trainees judge the goal of participating in training is not only attainable but also valuable.

Guideline #16: Organizational Climate Matters

Organizations with climates that encourage employee participation, empowerment, and autonomy may find it easier to implement learner-controlled training programs.

Source: Adapted from Renée E. DeRouin, Barbara A. Fritzsche, and Eduardo Salas, "Optimizing E-Learning: Research-Based Guidelines for Learner-Controlled Training," *Human Resource Management 43* (2004), pp. 147–162. Reprinted by permission of John Wiley & Sons.

Equipment Simulations

Some training may involve machines or equipment designed to reproduce physiological and psychological conditions of the real world that are necessary in order for learning and transfer to occur. For example, driving simulators or flight simulators are often used to train employees in driving or flying skills. Another example of a simulation is the Fire-Arms Training System (FATS), which is used by more than 300 law enforcement agencies in the United States.[107] In this simulation, officers are confronted with a number of everyday work situations (e.g., fleeing felons) on a video screen. The military uses virtual reality simulators for training involving war game demonstrations. One exercise, called the Synthetic Theater of War, links tactics, techniques, and processes of modern systems to illustrate battles.[108] Equipment simulators also are relied on in training for space missions (astronaut training). While many of these simulations are extremely costly, some have become more affordable. In addition, using simulators for training incurs only a fraction of the cost of using the real equipment to train employees.

Games, Simulations, and Outdoor Experiential Programs

Some training programs rely on a variety of games, nonequipment simulations, or outdoor experiential programs. In fact, these instructional techniques appear to be gaining in popularity with hundreds of different types of games available for teaching technical, managerial, professional, and other business-related skills. CaridianBCT, a firm responsible for enhancing blood quality, safety, and supply worldwide, modified its learning function by adding worldwide simulation-based training programs on business acumen, time management, and priority management. Scottrade, a retail brokerage firm, uses a customer service simulation-training module. For example, trainees might communicate with a "customer" who holds accounts with a competitor. Trainees from different departments submit their "best customer call" for consideration into a competition among departments. Memorial Health System in Springfield, Illinois, has a Clinical Simulation Center to train internal and external health care personnel (e.g. Air National Guard) in quasi-live environments.[109]

Some of the more common games include in-baskets and business games. Most games are used to teach skills such as decision making as well as analytical, strategic, or interpersonal skills. **Business games** typically require trainees to assume various roles in a company (e.g., president, marketing vice president) where they are given several years' worth of information on the company's products, technology, and human resources and asked to deal with the information in a compressed period (several weeks or months). They make decisions regarding production volumes, inventory levels, and prices in an environment in which other trainees are running competitor companies. The most successful business games keep the focus on specific corporate objectives or problems such as profits, customer service, or labor costs.

At Wachovia, an initiative was developed for employees in the audit division. The *Welcome to the Jungle!* program uses a visual learning map that combines metaphors, activities, games, hands-on skills practice, and participants' own experiences to teach and reinforce audit concepts. Department leaders team with participants to embark on a journey "through the jungle" that includes games, quizzes, and role-plays in a highly interactive learning experience.[110]

One very popular cross-functional simulation is **The Marketplace Business Simulation.** Working in teams, trainees must assume various roles in the start-up of a firm in the microcomputer industry. The teams work over a compressed period to play 2 to 3 years in the game. Performance is measured on a number of short- and long-term metrics (e.g., financial, marketing, human resource) comprising a **Balanced Scorecard.** Numerous levels and variations of the game are available depending on the expertise and backgrounds of the trainees. The simulation has been used all over the world as a capstone, integrative experience to an EMBA, MBA, or undergraduate program as well as by various companies.[111]

In-baskets, as discussed in Chapter 6, are used to train managerial candidates in decision-making skills by requiring them to act on a variety of memos, reports, and other correspondence that are typically found in a manager's in-basket. Participants must prioritize items and respond to them in a limited time. In-baskets are often included in assessment centers. For example, the method is used as one component of the week-long executive development program at the Center for Creative Leadership.

Outdoor experiential programs have gained in popularity as training methods for teams.[112] In Maryland, two popular firms are Terrapin Adventures and the University of Maryland Challenge Course at the Campus Recreation Center. Both have developed a variety of outdoor activities or challenge courses (canoeing and hiking trips courses, climbing platforms and towers, zip lines, swings, mountain biking, canoeing trips, hiking trips) that can be used to help employers build stronger teams. By placing a work unit in a challenge course or physical activity, the coaches or counselors can observe how the unit works together and can debrief them and provide feedback on issues of communication, conflict, and trust. In the Executive Leadership Strategies Program conducted at Lockheed Martin Corporation, senior leaders learn about their own personalities and issues of trust and teamwork as they participate in a set of outdoor ropes challenges delivered by the University of Maryland Campus Recreation Center. Similarly, in the EMBA and fulltime MBA programs at the University of Maryland, students participate in the UM Challenge course to build trust and bond with new teammates they will be working with.

Case Analysis

Most business students are very familiar with Case Analysis, a training method often used in management training to improve analytical skills. Trainees are asked to read a case report that describes the organizational, social, and technical aspects of some organizational problem (e.g., poor leadership, intergroup conflict). Each trainee prepares a report in which he or she describes the problems and offers solutions (including potential risks and benefits). Working in a group, trainees may then be asked to justify the problems they have identified and their recommendations. The trainer's role is to facilitate the group's learning and to help the trainees see the underlying management concepts in the case. At Kelly Services, the learning staff created 30 hours of intense training for sales personnel, which involved case studies, role-play exercises, and scenarios. Trainees then had to take a case study exam in teams and their results were used to determine the scope of their subsequent sales responsibility. Results showed that after completing the program participants increased sales opportunities by 63 percent over a year.[113]

Role-Playing

In a role-playing exercise, trainees act out roles and attempt to perform the behaviors required in those roles. Role-plays are commonly used in training to teach skills such as oral communication, interpersonal styles, leadership styles, performance feedback reviews, and interviewing techniques. In the popular MBA negotiations course, at the University of Maryland's Robert H. Smith School of Business, students participate in role-plays every class period to enhance their negotiating skills across a variety of situations (e.g., receiving jobs, raises and promotions, international deals, ethical dilemmas). Similarly, in the EMBA course "Leadership and Human Capital," executives are often video-taped while role-playing and given feedback on their skills. Checkfree Services, Inc., uses role-plays to teach managers skills for setting expectations, handling conflict situations, and using behavioral-based interviewing. ICICI Bank has a program called "Skill Through Drill" to teach the firm's customer service strategy to all employees. Using role-plays and video clips, it emphasizes practice, practice, and more practice.[114] At the *Chicago Tribune,* trainees are assigned the role of a supervisor giving performance appraisal feedback to a subordinate, while other trainees play the role of the subordinate. Xerox uses role-plays in some of its training programs to teach managers how to develop a culturally diverse workforce.

Behavior Modeling

Bandura's theory

Behavior modeling is a technique for training managers on interpersonal and supervisory skills. Many large companies such as Exxon, Westinghouse, and Union Carbide use this approach. Based on Bandura's **theory of social learning,**[115] the method consists of four consecutive components: (1) *attention* (watching someone perform a behavior usually through videotapes), (2) *retention* (processes to help the trainee retain what was observed), (3) *motor reproduction* or behavioral rehearsal (using role-plays to practice new behaviors), and (4) *motivation* or feedback/reinforcement (receiving feedback on the behaviors performed). The success of this approach to training is based on the notion that many of us learn by observing others. For example, suppose you have just taken a job as a sales

representative. You may spend some time watching the techniques used by other reps to get ideas for how to perform the job. If you practice the behaviors you have observed and get feedback from the "models" or others, your learning should be enhanced. Generally, trainees should observe predominately positive examples of the behaviors if the goal is to get them to reproduce the behaviors. At the U.S. Naval Construction Battalion at Gulfport, Mississippi, the use of behavior modeling resulted in superior retention of knowledge, transfer of learning, and end-user satisfaction.[116]

Modeling very effective for educators

Behavioral modeling is an excellent approach for training trainers and educators where a "master" teacher can serve as the model for the future trainer or teacher or someone who is having difficulties in the classroom. For example, many graduate programs assign a new grad student to a "star" professor who is teaching a course that the grad student will teach in the near future.

EVALUATION

Evaluation involves the collection of information on whether trainees were satisfied with the program, learned the material, and were able to apply the skills back on the job. It may be important to determine whether trainees are capable of exhibiting the appropriate level of a skill (e.g., do new supervisors know all of the organization's policies and procedures?). It may be important to know whether or not trainees have changed their behavior and if the change was due to training (e.g., do supervisors complete the necessary paperwork for disciplining an employee more after the training than before it was conducted?). Further, it may be critical to know that if the organization places a new group of supervisors in the same training program they will also improve their learning or behaviors. Evaluation efforts can be designed to answer these various questions or address these issues. According to the 2009 ASTD research report on evaluation, the most common actions taken based on evaluations of training programs are as follows:

- To help improve learning programs (52.9 percent).
- To gather performance data about instructors (47.8 percent).
- To make sure employees like the programs (47.4 percent).
- To satisfy legal requirements in a regulated industry (46.9 percent).
- To gauge whether or not employees are learning what's required of them (39.1 percent).
- To help meet performance goals of employees (36.2 percent).
- To ensure that learning programs positively influence employees' behaviors (33.1 percent).
- To satisfy management that the training function is doing its job (32.6 percent).
- To ultimately improve overall business results (31.4 percent).
- To demonstrate to others the value of the learning function (27.8 percent).[117]

Barriers to Training Evaluation

Evaluation ensures that programs are accountable and are meeting the particular needs of employees in a cost-effective manner. This is especially important today as organizations attempt to cut costs and improve quality. Without evaluation, it is very difficult to show that training was the reason for any improvements, and as a result management may reduce training budgets or staffs in times of financial hardship. While most companies recognize the importance of evaluation, few actually evaluate their training programs. In fact, in a recent survey, 77 percent of respondents said their evaluation efforts fall short in providing meaningful information for business planning. In fact, in another research report, it was noted that only 11.4 percent of respondents say their firms hold managers accountable for tracking pre- and posttraining performance to a high or very high extent. The proportion of the learning budget in firms spent on evaluation is fairly consistent, regardless of company size, although smaller firms (less than 100 employees) spend, on average, 6.5 percent of their learning budgets on evaluations, while larger firms (more than 10,000 employees)

spend about 4.4 percent on evaluation. The most common barriers listed to conducting evaluations of training include

- Too difficult to isolate training's impact on results versus other factors' influence (51.7 percent see this as a barrier to a high or very high extent).
- The firm's learning management system does not have a useful evaluation function (40.8 percent listed as a barrier to a high or very high extent).
- Evaluation data are not standardized enough to compare across functions (listed by 38 percent).
- It costs too much to conduct higher-level evaluations (listed by 32.2 percent).
- Leaders don't care about evaluation data (listed by 24.1 percent).
- Evaluation data are too difficult to interpret for most people (listed by 18.9 percent).
- Evaluations are not seen as credible (listed by 14.5 percent).[118] Many successful firms that emphasize training do so almost as a matter of faith and because of their belief in the connection between people and profits.[119]

Some firms, such as GE, believe that new ways must be used to evaluate training programs. They use surveys to realign training as needed and examine returns in the form of tangible and intangible business results, increased consumer satisfaction, and career development for GE workers.[120] The BEST organizations (as rated by ASTD) incorporate a wide variety of criteria to maximize the link between learning and performance. As a result, they have been able to show a wide range of benefits from their learning programs such as fewer work-related injuries, decreased errors, cost savings, improved productivity, larger market share, and better collaboration among work groups.[121] As an example, Caterpillar makes sure that every major program is graded by a performance scorecard and a reporting process that examines business impact. Reaction, application, and ROI data are reviewed monthly and reported to the board of governors quarterly. Over the past 6 years, the firm completed 11 studies to show how its corporate university program improved business performance.[122]

Types of Criteria

In a survey of learning executives (e.g., HR executive, CEO, chief learning officers) 67 percent stated that their most pressing issue was establishing a link between learning and organizational performance. A secondary concern reported by 49 percent was establishing ROI or value for learning.[123] Thus trainers should try to collect five types of data when evaluating training programs based on the Kirkpatrick/Phillips model of learning. These include: measures of trainees' reactions (Level 1), learning (Level 2), behavior change (Level 3), organizational results (Level 4), and return on investment (ROI) utility (Level 5). The first four of these criteria are widely used to evaluate corporate training programs, and the last, ROI has been added as another important source of evaluation data.[124] Another technique used to evaluate training is the Brinkerhoff Success Case Method. This involves identifying likely success cases and then interviewing those individuals to learn how they used the training and what results were achieved. According to Brinkerhoff, this method can be used to determine how many employees are using the training successfully, what the business value of those successes are, and how much value from the training has been unrealized. At least half of the respondents to the ASTD 2009 report on evaluation said they used this method.[125]

Five types of data

- *Reactions*—trainees' attitudes toward the training program, instructor, facilities, and so forth.
- *Learning*—changes in knowledge by trainees or level of knowledge reached after training.
- *Behavior*—changes in job performance or level of job performance reached after training.
- *Results*—changes in organizational measures (e.g., productivity, turnover, absences) due to training.
- *ROI*—monetary value of the results (benefits of training minus costs of training; expressed as a percentage).

According to the 2010 ASTD *State of the Industry* report, 91.6 percent of respondents said their firm used reactions to evaluate the program, 80.8 percent used learning for evaluation, 54.5 percent measured behaviors, 36.9 percent assessed results measures, and only 17.9 percent measured return on investment. Some question whether it is worthwhile to even collect reaction measures, and suggest that collecting behaviors and results should be the most important indicators to evaluate a program. There is, however, some good news. In a comprehensive meta-analysis of 162 training evaluation studies, it was found that the average or mean effect sizes for training interventions (across all topics and methods used) were fairly large. This reveals that reactions, learning, behavior, and results criteria should lead to meaningful positive changes in the organizations.[126]

Reactions

Organizations tend to spend the largest part of their evaluation budget on assessing trainees' reactions to the training. Reaction measures are designed to assess trainees' opinions regarding the training program. Using a questionnaire, trainees are asked at the end of training to indicate the degree to which they were satisfied with the trainer, subject matter and content, the materials (books, pamphlets, handouts), and the environment (room, breaks, meals, temperature). It is important to assess trainees' satisfaction with multiple aspects of a training program and not just their overall satisfaction.[127] Also, they may be asked to indicate the aspects of the program they considered to be most valuable and least useful to them. You have probably been asked to complete a reaction form or course evaluation instrument for some of your classes.

Despite relying on reaction measures to evaluate their programs, only 35.9 percent of them said this criterion has high or very high value. Favorable reactions to a program do not guarantee that learning has occurred or that appropriate behaviors have been adopted.

Little correlation between reaction and other criteria

In fact, there is little correlation between *reactions* and *other criteria*. However, it is important to collect reaction data for several reasons: (1) to find out how satisfied trainees were with the program, (2) to make any needed revisions in the program, and (3) to ensure that other trainees will be receptive to attending the program. Trainees should be given ample time at the end of the session to complete the reaction form. Also, trainers should assess trainees' reactions several months after the program to determine how relevant trainees felt the training was to their jobs. An example of a reaction form is presented in Figure 8-9.

Learning

Learning measures assess the degree to which trainees have mastered the concepts, knowledge, and skills of the training. Typically, learning is measured by paper-and-pencil tests (e.g., essay-type questions, multiple choice), performance tests, and simulation exercises. These measures should be designed to sample the content of the training program. Trainees should be tested on their level of understanding before and after training to determine the effect of training on their knowledge. Figure 8-10 presents two examples of performance tests used to assess learning. Figure 8-11 presents a more commonly used type of learning measure. Regarding learning criteria, trainee learning appears to be a necessary but insufficient prerequisite for changes in behavior, improvements in actual on-the-job performance, and "bottom-line" results. As noted earlier, many organizations use learning measures to assess the effectiveness of their training programs, and 54.9 percent of them believe these measures have high or very high value according to a 2009 ASTD report on evaluation.

Behaviors/Performance

Behavioral criteria are measures of actual on-the-job performance and can be used to identify the effects of training on actual work performance. Behavioral criteria are typically operationalized by using supervisor ratings. Behaviors of trainees before and after training should be compared to assess the degree to which training has changed their performance. This is important because one of the goals of training is to modify the on-the-job behavior or performance of trainees. Behaviors can be measured by relying on the performance evaluation system to collect ratings of trainees both before and after training. For example, trainees of the Federal Aviation Administration must submit subordinate evaluations of their supervisory behavior prior to attending the national training center in Florida. Subordinates also submit evaluations of the same supervisors' behavior 6 months after the training. To determine whether or not the supervisors' skills have improved due to training, the performance evaluations they received from their subordinates before and

Learning and actual performance not highly correlated

Figure 8-9 An Example of a Trainee Reaction Questionnaire

Please offer your views about this training program. This will help us to understand the strengths of the program and areas for continuous improvements. You do not need to put your name on this form.

1. Overall, how would you rate this program? (Check one)
   Unsatisfactory _____ Satisfactory _____ Good _____ Outstanding _____

   Please explain the reasons for your rating:

2. Were your expectations:? (Check one)
   Not met _____ Met _____ Exceeded

3. To what extent will you recommend this training program to others? Please explain your view in the space below.

   Definitely not recommend Probably not recommend

   Definitely will recommend Probably will recommend

   _____

   _____

   _____

   _____

4. Please rate the relative value (1 = not at all valuable; 2 = somewhat valuable; 3 = extremely valuable) of the following components of the training program to you:

Movie clips	_____	Role-playing exercises	_____
Workbooks	_____	Small group exercises	_____
Simulations	_____	Lectures	_____
Cases	_____	Assessment tools	_____

5. Please rate the main lecturer's presentation (1 = not effective; 2 = somewhat effective; 3 = very effective) in terms of:

   Ability to communicate _____

   Organization of the course _____

   Content expertise _____

   Interest in trainees' learning _____

6. Please rate the following cases, assessments, and exercises by placing a checkmark in the appropriate column:

	Poor	Fair	Good	Excellent
Negotiating Corporate Change				
Reviewing Performance Goals				
Managing Conflict				
Handling Employee Complaints				
Improving Employee Performance				
Conflict Management Inventory				
Emotional Intelligence Assessment				
First Maryland Financial Services				
Personality Assessment				

7. Was the ratio of lectures to exercises (check one): High _____ OK _____ Low _____?
8. Were the simulations relevant to your work? (check one)

   Not at all _____

   Somewhat _____

   Extremely _____

9. To help the training director and the staff provide further improvements in future programs, please give us your candid opinion of each exercise leader's contribution to your learning. (Place your checkmarks in the appropriate boxes.)

	Poor	Below Average	Average	Above Average	Excellent
Wouters					
Cohen					
Mogan					
Martin					
Gettman					
Novotny					
Stevens					
Wilson					
Spina					

10. How would you evaluate your participation in the program? (check)

    Overall workload: Not enough _____ Just right _____ Too much _____

    Interaction with others: Not enough _____ Just right _____ Too much _____

    Assignments: Too heavy _____ Just right _____ Too light _____

11. What suggestions do you have for improving the program?

    _____

    _____

    _____

Figure 8-10
Examples of Learning Performance Tests

MECHANICS

"You have in front of you a gear reducer, a line shaft, bearings, and coupling. I want you to assemble and adjust the proper alignment so that the finished assembly is a right-hand (or left-hand) driven assembly. Set the coupling gap 1/8 inch apart. You do not have to put the grid member in place or fasten the coupling covers. After you are finished, I will ask you where and how the grid member should go in. You will have 45 minutes to complete this job."

PAINTERS

"I want you to boost yourself up about 10 feet off the floor using this boatsman chair, and then tie yourself off so that you don't fall. After that, I would like you to hook this spraygun to the air supply, set the regulator to the correct pressure, and then spray this wall."

Source: WEXLEY, KENNETH N.; LATHAM, GARY P., DEVELOPING AND TRAINING HUMAN RESOURCES IN ORGANIZATIONS, 2nd, © 1991. Reproduced by permission of Pearson Education, Inc., Upper Saddle River, New Jersey.

after completion of training are compared. A variety of performance appraisal measures can be used to assess behavioral changes of trainees. These are described in detail in Chapter 7. Figure 8-12 presents a sample behavioral measure. Some of the most effective tools for measuring behaviors are using follow-up focus groups, monitoring performance records, and follow-up surveys of trainees.

The 2009 ASTD research report on evaluation indicated that while only 54.5 percent of firms measure behaviors as part of their evaluation efforts, the majority of them (75 percent) believe these measures have high or very high value. In addition, they noted that very few (39.3 percent) collect premeasures of behaviors. Most do not allow for much time after training before collecting behavioral measures. In fact, 37.9 percent of firms collect behavioral measures within the first 2 weeks after the training, while 55.8 percent collect behaviors 2 weeks to 2 months after training and 51.7 percent collect behavioral measures more than 2 months after training, Thus since so few firms collect pre- and postmeasures, it will be difficult for them to assess behavioral change over time. In addition, most behavioral change is expected to take some time to really take effect, so by collecting behavioral measures so quickly after training, they may not be able to fully realize the effects of the training.[128]

Figure 8-11
Sample Learning Measure

SAMPLE ITEMS FROM A MGIC TEST TO EVALUATE SUPERVISOR KNOWLEDGE

1. T or F — When preparing a truth-in-lending disclosure with a financed single premium, mortgage insurance should always be disclosed for the life of the loan.
2. T or F — GE and MGIC have the same refund policy for refundable single premiums.
3. T or F — MGIC, GE, and PMI are the only mortgage insurers offering a nonrefundable single premium.
4. _____ — Which one of the following is not a category in the loan progress reports?
   (a). Loans approved
   (b). Loans-in-suspense
   (c). Loans denied
   (d). Loans received
5. _____ — Which of the following do not affect the MGIC Plus buying decision?
   (a). Consumer
   (b). Realtor
   (c). MGIC underwriter
   (d). Secondary market manager
   (e). Servicing manager
6. _____ — The new risk-based capital regulations for savings and loans have caused many of them to:
   (a). Convert whole loans into securities
   (b). Begin originating home equity loans
   (c). Put MI on their uninsured 90s

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Figure 8-12
Sample Survey Behavioral Measure

Instructions: The purpose of this questionnaire is to determine the extent to which those who attended the recent leadership program have applied the principles and techniques that they learned back on the job. The survey results will help us to assess the effectiveness of the program. Please circle the appropriate response for each question.

5 = Much more 4 = Some more 3 = The same 2 = Some less 1 = Much less

	Time and Energy Spent after the Program Compared to Time and Energy Spent before the Program				
Understanding and Motivating					
1. Getting to know my employees	5	4	3	2	1
2. Listening to my subordinates	5	4	3	2	1
3. Praising good work	5	4	3	2	1
4. Talking with employees about their families and interests	5	4	3	2	1
5. Asking subordinates for their ideas	5	4	3	2	1
6. Managing by walking around	5	4	3	2	1
Orienting and Training					
7. Asking new employees about their past experiences, etc.	5	4	3	2	1
8. Taking new employees on a tour of the department and facilities	5	4	3	2	1
9. Introducing new employees to their co-workers	5	4	3	2	1
10. Being patient with employees	5	4	3	2	1

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Organizational Results

The purpose of collecting **organizational results** is to examine the impact of training on the work group or entire company. Data may be collected before and after training on criteria such as productivity, turnover, absenteeism, formal complaints/lawsuits, accidents, grievances, quality improvements, scrap, sales, and customer satisfaction. The trainer will try to show that the training program was responsible for any changes noted in these criteria. This may be difficult to do without a careful design and data collection strategy, since many other factors could explain the changes detected. For example, changes in dollar sales could be due to a new pay system rather than to a sales training program. An evaluation using a results measure (pharmacy sales) was conducted for a training program designed for pharmacy technicians at 2,000 Walgreen stores. Sales for pharmacies where technicians had received 20 hours of classroom training and 20 hours of OJT were $9,500 greater annually than those for pharmacies where technicians received only OJT. Results criteria (e.g., productivity, sales, company profits) are the most distal and macro criteria used to evaluate the effectiveness of training. According to the 2009 ASTD research report on evaluation, only 36.9 percent of firms assess results to evaluate their programs, despite the fact that 75 percent of them see results measures as having high or very high value. The most frequently used metrics are customer service, which is used to a high or very high extent by 38.9 percent of firms; employee satisfaction (used by 37 percent); and learner/employee perceptions of impact (used by 36.3 percent). The least likely metrics are business outcomes (used by 22.4 percent of firms) and turnover/promotion (used by 24.8 percent). The survey also reported that using actual business outcomes (e.g., revenue, sales), proficiency/competency levels, and learner perceptions of impact were the results measures most highly related to overall evaluation success.[129]

Assessing the Costs and Benefits of Training

A variety of methods can be used to assess the dollar value of training. According to the 2009 ASTD report on evaluation, only 17.9 percent of firms measured the ROI of training, yet 59.4 percent said it had high or very high value.[130] No matter which approach is used, costs and benefits associated with training must be estimated. Some **costs** that should be measured for a training program include (1) one-time costs such as needs assessment costs,

salaries and benefits of training designers, purchase of equipment and media (computers, videos, handouts, distance learning techniques), program development costs, evaluation costs for the first offering of the program; (2) costs associated with each training session such as trainers' costs (salaries and benefits, travel, lodging, meals) and facilities rental; and (3) costs associated with trainees including trainee wages during training, travel, lodging, meals for trainees during training, and nonreusable training materials.

It is important to compare the **benefits** of the training program with its costs. One benefit that should be estimated is the dollar payback associated with the improvement in trainees' performance after receiving training. This is often difficult to approximate. Since the results of the experimental design will indicate any differences in behavior between those trained versus those untrained, the trainer can then estimate for that particular group of employees (e.g., managers, engineers) what this difference is worth in terms of the salaries of those employees. Often, the amount gained per trainee per year is multiplied by the number of persons trained. Another factor that should be considered when estimating the benefits of training is the duration of the training's impact, that is, the length of time during which the improved performance will be maintained. While probably no programs will show benefits forever, those that do produce longer-term improved performance will have greater value to the organization.

Return on Investment (ROI)

Given the increasing amount of money that firms budget for training, it is imperative that companies be able to estimate the **return on investment (ROI)** that training provides them. To do this, firms should assess the costs and benefits associated with their programs. However, one study noted that **ROI** metrics were used by only 20 percent of respondents. This may be because a lot of training is targeted to leadership and other soft skills that are difficult to track in terms of concrete measurements. A 2008 World atWork survey of European HR leaders noted that ROI was rated high on the scale for importance, but it was last on the list of HR's ability to actually report those metrics.[131] In one study that did examine ROI with several training programs at a pharmaceutical firm, it was found that the managerial training programs had an average **ROI** of 45 percent, while the sales and technical training programs had an average **ROI** of 156 percent. At Ford, all training programs are evaluated against the criterion of product line profitability. A tracking system shows costs and revenue for training facilities and individual courses.[132] The basic **ROI** formula is as follows:

$$\text{ROI (\%)} = \frac{\text{Net program benefits}}{\text{Program costs}} \times 100$$

For example, at an 18-week literacy program for entry-level electrical and mechanical assemblers at Magnavox Electronics Systems Company, the results were impressive. The benefits (productivity and quality) were $321,600 while the costs were only $38,233. Thus, the **ROI** is calculated as 741 percent. This means that for each dollar invested, Magnavox received $7.41 over the cost of the program.[133]

$$\text{ROI} = \frac{\$321{,}600 - \$38{,}233}{\$38{,}233} \times 100 = 741\%$$

When making **ROI** calculations, it is important to use reliable and credible sources and to be conservative when estimating benefits and costs for training. It is also important to involve management when deciding on what is an acceptable **ROI** as a target goal for the training. For example, British Airways has utilized training to become one of the most profitable airlines in the world. Before training begins, a tangible value for the training investment is set, reflecting how much improvement in customer satisfaction is to be expected if training is successful.[134] Caterpillar has its own university, which delivers competency courses to dealers via e-learning in eight different languages that address specific needs that arise from a needs assessment. In 2007, it reported that 4,500 dealers were engaged and that early performance metrics indicated nearly 400 percent return on investment for dealers.[135]

Utility Analysis

Another approach that can be used when calculating the value of training is a utility model. (See Chapter 6 for a review of utility.) This is difficult but may be important for showing top management the value of training for the organization. Utility is a function of the duration of a training program's effect on employees, the number of employees trained, the validity of the training program, the value of the job for which training was provided, and the total cost of the program. **Utility analysis** measures the economic contribution of a program according to how effective it was in identifying and modifying behavior.[136] Because the calculations involved in a utility analysis are based on subjective estimations, this model has not yet gained widespread acceptance by trainers as a practical tool for evaluating return on training investments.[137]

Designs for Evaluating Training

Answers two primary questions

After determining the criteria to use in evaluating the training program, the trainer should choose an experimental design. The design is used to answer two primary questions: (1) whether or not a change has occurred in the criteria (e.g., learning, behavior, organizational results) and (2) whether or not the change can be attributed to the training program. Designs employ two possible strategies to answer these questions. The first is to compare the trainee's performance before and after participation in training. This is done to see what changes may have occurred in learning, behavior, or organizational results. While this is important for answering the question of whether change has taken place, it is deficient in answering the question of whether the change can be attributed to the training program since the criteria may have changed for a number of reasons. Answering the second question requires a design comparing the changes that occurred in the trainees with changes that occurred in another group of employees who did not receive the training (e.g., a **control group**), yet are similar to the training group in important ways (e.g., similar job titles, rank, geographical location). The most effective experimental designs use both strategies (i.e., before–after measures and a control group) and are better able to answer both questions. Some of the more commonly used designs for training evaluation are described next.[138]

One-Shot Posttest-Only Design

In many organizations, training is designed and conducted without prior thought given to evaluation. For example, a plant manager may decide to put all the employees in a safety training course. After the course is completed the manager decides to evaluate it. At this point, the design would look like this one:

TRAINING ——→ MEASURE

Any of the four types of criteria (reactions, learning, behavior, organizational results) could be used as the "after" measures. It would be difficult, however, to know what, if any, changes occurred since no "before" measure (pretest) was made. In addition, because the results may not be compared with those of another group who did not receive training, it would not be possible to say whether any change was due to the training. If, however, the primary goal was to make sure that the trainees reached a certain mastery level, then the design might still be appropriate (e.g., the trainees reached a 95 percent safety goal).

One-Group Pretest–Posttest Design

Another design for evaluating the training group on the criteria is to measure the group before and after the training. This design is as follows:

MEASURE ⟶ TRAINING ⟶ MEASURE

This design can assess whether a change has occurred for the training group in the criteria (e.g., learning, behavior) that is useful. Unfortunately, it is not able to tell for sure whether or not the change is due to training, since there is no control group. A change that is detected could have been caused by the introduction of new equipment, a new manager, or revised pay systems, or it could have occurred for a number of other reasons. If the trainer is going to use this design, it is important to document other events that have occurred during the measurement period to determine the most likely explanations for any detected changes.

Posttest-Only Control Group Design

A much stronger design for assessing the effectiveness of a training program is shown here:

GROUP 1: R: TRAINING ⟶ MEASURE

GROUP 2: R: NO TRAINING ⟶ MEASURE

In this design, two groups are used and individuals are **randomly assigned** (R) to either group (i.e., an individual has an equal chance of being put in either group 1, the training group, or group 2, the **control group**). The use of random assignment helps to initially equalize the two groups. This is important to ensure that any differences between the two groups after training are not simply caused by differences in ability, motivation, or experience. The **posttest-only control group** design is useful when it is difficult to collect criteria measures on individuals prior to offering them the training. For example, the trainer may believe that giving individuals a pretest, such as a learning test, may overly influence their scores on the posttest, which might be the same learning measure. Another trainer may not have time to give premeasures. Individuals are randomly assigned to the two groups, and their scores on the posttest are compared. Any differences on the posttest can be attributed to the training program since we can assume that the two groups were somewhat equal before training. It would be beneficial to make sure that the employees from the control group are placed in a training program later so that they have similar opportunities.

Pretest–Posttest Control Group Design

Another powerful design that is recommended for use in training evaluation is as follows:

GROUP 1: R: MEASURE ⟶ TRAINING ⟶ MEASURE

GROUP 2: R: MEASURE ⟶ NO TRAINING ⟶ MEASURE

Individuals are randomly assigned to the two groups. Criteria measures are collected on both groups before and after the training program is offered, yet only one group actually receives the training (group 2 is the control group). Comparisons are made of the changes detected in both groups. If the change in group 1 is significantly different from the change in group 2, we can be somewhat certain that it was caused by the training. The two features that make this a stronger design are the ***randomization*** of people into the groups and the use of a *control group.* These aspects enable us to determine (1) if a change occurred and (2) whether the change was due to training. Since many organizations will want all of the employees in both groups to receive the training, the training can be offered to group 2 at a later time.

Multiple Time-Series Design

Another design recommended for use in training evaluation is shown below:

GROUP 1: R: MEASURE → MEASURE → MEASURE → TRAINING → MEASURE → MEASURE → MEASURE

GROUP 2: R: MEASURE → MEASURE → MEASURE → NO TRAINING → MEASURE → MEASURE → MEASURE

In this design, individuals are randomly assigned to either of two groups, and the criteria measures (learning, behavior, results) are collected at several times before and after the training has been offered. This design allows us to observe any changes between the two groups over time or any trends in performance. If the effects of training held up over several months, this design would offer stronger support for the program. Of course, this design might be more costly or difficult to implement since it requires taking measurements of individuals multiple times.

Benchmarking Training Efforts

To conduct a thorough evaluation of a training program, training departments can benchmark their practices against the best in the industry. They can compare their training department to leading-edge companies in terms of (1) training activities (e.g., percent of payroll spent on training, average training hours per employee, training dollars spent per employee, percent of employees trained per year, training staff per 1,000 employees), (2) training

results (e.g., average percent of positive trainee ratings per year, average percent of satisfied trainees, average percent gain in learning per course, average percent of improvement in job performance, cost savings as a ratio of training expenses, revenues per employee per year, profits per employee per year), and (3) training efficiency (e.g., training costs per student hour, time on task). The **American Society for Training and Development (ASTD)** provides conferences and sessions each year where HR and training professionals can learn strategies from the ASTD BEST award winners. See www.astd.org for more information.

PLANNING FOR TRAINING EFFECTIVENESS IN ORGANIZATIONS

One review on training concludes: "We must do a better job of linking training outcomes to organizational and business outcomes, and do so while involving organizational decision makers."[139] Four guidelines are offered for training professionals on planning "collaborative" interventions that are more likely to affect business objectives. Figure 8-13 presents these guidelines.

Figure 8-13
Collaborative Planning for Training

Guideline: Develop a theory of impact

Goal:	Link evaluation and measurement to unique capabilities and/or strategic initiatives of the organization.
Strategies:	• Identify business results that matter to the organization. • Link training outcomes to measures of organizational effectiveness. • Link measures of organizational effectiveness to job-level knowledge and skills.
Tools:	• Scan internal and external environment to determine organization-level strategic initiatives. • Develop logic models or causal models linking training to organizational impact. • Involve decision makers in long-term planning for training.

Guideline: Reframe the point of evaluation from proof to evidence

Goal:	Establish reasonable expectations from decision makers about the type of evidence that will demonstrate training success.
Strategies:	• Distinguish between proof and evidence in the minds of decision makers. • Identify required levels of evidence to show training success. • Frame expectations for evaluation outcomes in the minds of decision makers.
Tools:	• Clarify the purpose for evaluation or intended use of information. • Clarify costs of evaluation as a function of evaluation rigor. • Involve decision makers in planning for training evaluation.

Guideline: Isolate the effects of training

Goal:	Eliminate or reduce counterarguments to claims that training is effective.
Strategies:	• Demonstrate linkage between training and organizational effectiveness. • Choose appropriate research designs.
Tools:	• Use control groups and pretests whenever possible. • Use trend lines or staggered start dates for training when more sophisticated research designs are unavailable. • Use the internal referencing strategy when other research designs are unavailable.

Guideline: Establish accountability for training

Goal:	Improve the impact of training on individual and organizational effectiveness by involving all organizational members in the planning of training.
Strategies:	• Increase motivation to train in trainees. • Increase support by peers and supervisors on the job. • Increase organizational support for training.
Tools:	• Use evidence of past training success to enhance motivation of future trainees. • Clarify the relationship between training and organizational effectiveness and train supervisors in posttraining support behaviors. • Involve decision makers in planning for training.

Source: K. Kraiger and W. J. Casper, "Collaborative Training for Training Impact," *Human Resource Management* 43 (2004), p. 343. Reprinted with permission from John Wiley & Sons.

SPECIAL TRAINING PROGRAMS

Training for Generational Transitions

Competition for talent is a worldwide phenomenon. Over the next decade, Baby Boomers (those born between 1946 and 1964) will be retiring in larger numbers, and there are not as many individuals in the following generation (X) to fill that void. There are only 43 million Gen Xers to fill the shoes of 76 million boomers. Thus a skills shortage will be facing many employers, particularly in the financial and IT areas. Many CFOs and CIOs note that finding talent is one of their biggest concerns.[140] Not only is the private sector in U.S. firms facing a labor shortage, but the public sector is probably facing an even greater workforce deficit. With nearly half of all supervisors and nearly 40 percent of current federal employees expected to retire by 2016, federal agencies are racing against the clock to find top talent. Chief Human Capital Officers (CHCOs) are charged with the job of addressing generational transitions and leadership development issues. Agencies may also receive help from the U.S. Congress. The *Federal Supervisor Training Act* was a bill introduced in 2007, which updates and improves mandatory supervisor training programs.[141]

Baby-boomer training

Some training has now been targeted toward Baby Boomers to retain them in the workforce or to rehire them. Baby Boomers are the "institutional memory" of a firm. Consequently, they should be valued and retained so that they maintain their loyalty to the firm or they may take their market tips, trade secrets, and fellow employees to competitors. To protect their investment, employers can use their experienced workers in a number of ways: as subject matter experts for new hires; to write work manuals for older equipment, processes, and business functions; to form innovative intergenerational teams; and to launch phased retirement, age-related sabbaticals, and rehired-retiree programs.[142]

In addition to focusing on training Baby Boomers, employers should also examine how their training enhances the learning and performance of their other generations of workers (Generation X and Y employees). Generation X and Y employees are currently in the workforce and are already participating in many training programs in organizations. Some firms have already discovered that they will need to provide a different type of training for these newer employees. For example, after experiencing much higher than normal turnover rates among Gen Y drivers, UPS had to change the way it viewed and delivered training. Instead of lowering its standards and the expectations for drivers, it changed the way it prepared them to hit the road. After 20 months of analysis and design, UPS opened Integrad in 2007 in Landover, Maryland. The $5.5 million 11,500-square-foot learning facility has revolutionalized how UPS trains its drivers. The Integrad learning lab offers many different delivery methods including online learning, 3-D models, podcasts, videos, hands-on learning, and classroom methods. Aspiring UPS drivers must complete a 21-hour precourse before attending the 46-hour learning lab in Maryland. The program is so successful in terms of quality, production, safety, and business development that UPS has already had phone calls from other organizations that want to come and benchmark it.[143]

In Europe, employers are also recognizing that they need to prepare the next generation of workers for employment as well as try to keep some of the older workers from leaving. Still, the latest research finds many organizations failing to prepare for the wave of departing workers and their less-experienced replacements. Lifelong learning initiatives such as workplace training, technical skills transfer, and training outside the office were rated as highest in Britain compared to France, Spain, Germany, and Italy. In India, "finishing schools" are gaining in popularity as a way to help new college graduates learn workplace fundamentals (e.g., arriving on time, dressing appropriately, learning listening skills).[144]

Employee Orientation Programs and Onboarding

Most firms provide some type of employee orientation where new employees are informed about their roles and responsibilities (i.e., what is expected of them) in an effort to ease their transition to the firm. The trend seems to be continuing as more firms have been placing their new employees in orientation programs to familiarize them with their supervisors and co-workers, the company policies and procedures, the requirements of their jobs, and the organizational culture. The intent is to increase an employee's job satisfaction and to reduce turnover. Unfortunately, most of these programs are not properly planned, implemented, or evaluated. All too often new employees are given a brief introduction to the

company and are then left to learn the ropes by themselves. Often this leads to feelings of confusion, frustration, stress, and uncertainty among new employees. In fact, job satisfaction is often related to an employee's orientation. If employee dissatisfaction leads to turnover, this can be quite costly for the firm. For example, at Merck & Company, turnover costs have been estimated to range from 1.5 to 2.5 times the annual salary paid for a job.[145]

Three objectives for orientation

Generally, the objectives of an employee orientation program are threefold: (1) to assist the new employee in adjusting to the organization and feeling comfortable and positive about the new job; (2) to clarify the job requirements, demands, and performance expectations; and (3) to get the employee to understand the organization's culture and quickly adopt the organization's goals, values, and behaviors. A Realistic Orientation Program for New Employee Stress (ROPES) has been suggested as the model. Employees would be given realistic information about the job and the organization, general support and reassurance from managers, and help in identifying and coping with the stresses of the job. This should reduce turnover of new employees, resulting in savings for the company.[146]

Three stages

Most orientation programs consist of three stages: (1) a general introduction to the organization, often given by the HR department; (2) a specific orientation to the department and the job typically given by the employee's immediate supervisor; and (3) a follow-up meeting to verify that the important issues have been addressed and employee questions have been answered. This follow-up meeting usually takes place between a new employee and his or her supervisor a week or so after the employee has begun working. A follow-up meeting is very important because often new employees may feel uncomfortable seeking out a supervisor regarding any questions they face. A supervisor or a human resources representative should meet with the employee to be sure that he or she is effectively "learning the ropes" of the organization. The orientation program used by the Disney Corporation for employees of Walt Disney World in Orlando, Florida, follows this multiple-stage format in most respects. Individuals begin their employment by attending a one-day program, "Disney Traditions II," which describes the history of the organization and the values of the culture. On this first day, employees are also taken on a tour of the facilities. On the second day, they are provided with descriptions of the policies and procedures. The third day, OJT begins with an assigned buddy who is an experienced co-worker. Buddies spend anywhere from 2 days to 2 weeks showing new employees their job duties and providing feedback as they attempt to perform the tasks. As a result of participating in the orientation program, employees express less confusion with their new jobs.[147]

The training department should be actively involved in planning, conducting, and evaluating orientation programs. It also should enlist the support of other employees to serve as mentors to new employees. Also, supervisors should be called on to help orient new employees to the workforce and should receive training on how to do this. In the follow-up meeting, supervisors should be required to complete a checklist, indicating that they have discussed with new employees the major issues of concern. Employees should sign the checklist to confirm that they have received the orientation information. Evaluation of the orientation program is the responsibility of the human resource department.[148] American Express recently launched a number of initiatives to address attrition and to increase employees' engagement in the firm. "Connections" is a program that educates new employees about the firm's values, vision, and customers.[149]

Well-developed orientation programs are rare

Well-developed orientation programs are effective in preparing a new employee for a firm, yet these are more the exception than the norm. With today's "war for talent" faced by employers, it is critical for firms not only to hire new employees, but to retain them. *Onboarding* might be one answer to this concern. **Onboarding** is a systematic process to establish a positive trajectory early in a person's career.[150] It includes cultivating key relationships and access to information, phased implementation, and defining multiple roles. Often it is used for new managers. Onboarding provides information and tools to new managers when they are ready to use them and is best implemented throughout a period of weeks or months. Four phases are often commonly used (prearrival, orientation, assimilation, integration). For the *prearrival* of the new manager, it is important to make sure that direct reports and key constituents know about his/her start date and relevant background information. During the *orientation/introduction* phase, provide the essential tools so the new manager can be effective (e.g., computer passwords, office equipment, knowledge of office layout,

administration codes, access to company e-mail and intranet). For the *assimilation* phase, deliver essential background information about the company strategy, expected contribution, short-term goals, and key working relationships. In the *integration/contribution* phase, define long-term results and make sure that early contributions by the person are visible.[151]

More and more firms are recognizing that onboarding can be an important part of the talent management process by ensuring that the early entry period is successful for new managers. At Avon, the goal of onboarding is to help newcomers become educated about the cultural norms and part of the family at Avon. With over 320,000 employees worldwide, Citigroup recognizes the importance of newcomers feeling a sense of belonging to the firm. Introducing its 37 networks (e.g., Hispanic, Pride, Working Parents affinity groups) to new employees on the first day enables them to start to feel connected to the firm. At Pepsi Bottling Group, onboarding is taken very seriously by investing a lot to give new managers what they need to do the job effectively. InterContinental Hotels Group has a "Room to be Yourself" onboarding program. It makes four promises to employees: room to have a great start, room to be involved, room to grow, and room for you. United Overseas Bank Limited rolled out a new onboarding program in 2009 so that all new hires would have an engaging experience when joining the firm. Ryan, Inc. developed the "onboarding learning plan," which contains more than 20 company-specific recorded training programs that new employees can access right away.[152]

Differences between orientation and onboarding

The differences between orientation programs and onboarding are primarily in terms of timing, focus, delivery, and responsibility. While orientation is often a single event (day) and focuses on HR policies and procedures, onboarding is usually a phased approach and has a broader focus on success factors and company culture. Orientation is often classroom-led while onboarding uses multiple approaches such as web-based and classroom methods and CD-ROMs. Perhaps most important, orientation is often seen as the responsibility of only the HR department, while the responsibility for onboarding is shared among HR, the new boss, a peer coach, and the process owner.[153]

Training for Teams

Training techniques can be chosen for individual-level training or for training that is conducted for work teams. With the increasing popularity of teams in organizations,[154] it is common for employers to send their teams to training sessions. For example, Hewlett-Packard started its team members on a 2-week training and orientation program to familiarize everyone with the existing processes and the needs of the business.[155] Likewise, Allied Signal sent its maintenance teams from the Garrett Engine Division to a 2-day course in team building. Cummins Engine Company places improvement teams through a 5-day training program that is based on an action learning model (classroom and OJT training).[156] GE sends entire teams to participate in business games, all of which deal with real GE strengths, weaknesses, opportunities, and threats (SWOT) analysis.

Team training often focuses on teaching members how to work more effectively or efficiently in teams. Some topics include team building, problem solving, running effective meetings, managing stress, managing productivity, appraising team members' performance, and managing conflict. **Trust building** is also an important component of the training.[157] Employers offer training in problem solving, meeting skills, communication skills, handling conflict, roles and responsibilities, quality tools and concepts, and evaluating team performance.[158] In general, trainers use a variety of training techniques when conducting team training such as information-based, demonstration-based (videos), and practice-based (role-plays) methods.[159] In some cases, "ropes" or challenge courses are used to build stronger, more cohesive teams.[160] At Patapsco Valley Veterinary Hospital, employees participate in team-building training sessions, including outdoor challenge activities, to further enhance communication, trust, and collaboration among the team of veterinarians, vet technicians, and receptionists. It also cross-trains its team of technicians and receptionists to provide greater flexibility in staffing for the firm.

Building trust is important

Often teams are formed with individuals from various functional areas (e.g., marketing, finance, sales, production). These **cross-functional teams** may require training in other disciplines to help them understand what is involved in other functional areas (called multi-skilling or cross-training). This has been used in the military,[161] in high-technology firms,[162]

and in assembly plants.[163] Generally, job rotation may be used or individuals may receive training from their peers on other disciplines. For example, peer trainers have been used at T. J. Maxx, a national retail chain, and at Xerox.[164] In fact, sometimes unstructured or informal learning from peers is more effective than structured classroom training.[165] Peers are helpful in socializing new employees, reducing stress, and helping newcomers establish satisfying social relationships.[166] The benefits of cross-training are that it may provide employees with more skill variety or interesting tasks, allow for more flexibility in getting the work done when teammates are absent, and help workers to better understand the entire work process.[167] It may be important to clarify expectations of cross-training during an employee's orientation to the firm in order to set a realistic preview of the job.

Diversity Awareness Training

Managing diversity effectively is one of the greatest challenges for organizations over the next century.[168] Many firms throughout the world face discrimination claims from immigrants, women, older workers, gays, lesbians, various racial and ethnic groups, those with physical disabilities, and those of varying religious affiliations. In addition, different values, attitudes, and behaviors of generations (e.g., Baby Boomers, Generation Y) or types of workers (blue collar vs. white collar) have implications for the management and training necessary to use with these groups.[169] Some employers have been proactive about hiring more diverse employees to mirror the population or have trained their employees to better reach a diverse client base. BB&T has expanded its services to Spanish-speaking communities by training employees to interact with Spanish-speaking clients (using DVDs, CDs, workbooks). Upon completion of the self-study guide, employees call into a telephone testing service to measure their proficiency.[170]

Other firms, however, have minimized diversity issues and subsequently have faced discrimination suits (e.g., State Farm Insurance with gender bias; Denny's Restaurant with racial bias).[171] Research on diversity issues has increased.[172] In addition, training for increasing awareness of the diverse workforce has become more prevalent in organizations, and a variety of different programs exist.[173]

Diversity awareness programs have been developed for a variety of reasons, including improving the productivity and competitiveness of the firm, changing attitudes and stereotypes, reducing conflict, improving communication and work relationships, enhancing creativity, and improving the progress and satisfaction of women, minorities, and others into upper management positions.[174] When Texaco settled a race discrimination lawsuit, it agreed to put its 29,000 employees through a 2-day workshop on race, gender, and culture. Texaco has tripled the number of workshops it offers each month and hired an additional 27 consultants. The workshops focus on four broad areas: creating a diverse workforce, managing a diverse workforce, creating an environment that values a diverse workforce, and leveraging diversity into a competitive business advantage.[175] Deloitte and Touche USA employs more than 40,000 people in 90 American cities. One of its most innovative learning initiatives is the Cultural Navigator, a package of tools and resources that presents a wide range of easy-to-use learning, consulting, and assessment solutions. It enables individuals to compare their personal profiles with those of other cultures and identify areas of commonality and differences. A cultural simulator tests and reinforces awareness and learning by creating online simulations around a variety of management topics pertaining to a specific country or region.[176] AT&T boasts one of the nation's most progressive diversity programs.[177] Chase offers a comprehensive diversity program for all its employees, including awareness training and skill building. Similarly, ExxonMobil has a training program called Internal Resource Education that is an intense team-based course conducted in three 1-week segments.[178] American Express created a program called Diversity Learning Labs for training.[179]

To assist in the placement and advancement of employees with disabilities, the EEOC has written material and a video on hiring and developing individuals with disabilities. In recent years, researchers have offered suggestions for assisting employees with disabilities to become more effectively socialized in organizations.[180] Sears became a model by benchmarking the practices of other firms and then adopting them to its own workplace.[181] Some firms (e.g., Xerox, American Express, Disney) have offered diversity training programs to reduce discrimination due to disability.

Flaws with diversity programs

Despite all the new training initiatives for diversity awareness, some recent studies have found a number of flaws with the programs, including not addressing development or advancement issues, not providing tools to reinforce the training, no metrics for evaluating effectiveness of training, clear objectives not established, material too U.S. focused, concerns of line managers not dealt with, trite content, little thought leadership shown, poor facilitation skills, and employers' policies and practices not addressed.[182] Diversity training programs will only be successful if they have top management support and participation. They also need the input of middle management and line managers to know the kinds of issues faced by employees on a daily basis.[183]

American Express formed a high-level diversity council to guide and drive the company's diversity efforts. Likewise, at Hewlett-Packard, the diversity initiatives are driven by the Diversity Leadership Council, which is comprised of senior executives. Along with top managers, immediate supervisors and peers must support and reinforce diversity programs. In addition, trainees should be rewarded for positive changes in their behaviors.[184]

Other factors determining whether or not a company adopts a diversity training program include whether the firm is large, has a high strategic priority of diversity relative to other competing objectives, has the presence of a diversity manager, and has in place a large number of other diversity-supportive policies.[185] Other research has shown the perceived success of diversity training programs to be related to mandatory attendance for all managers, long-term evaluation of training results, managerial rewards for increasing diversity, and a broad definition of diversity in the organization.[186] Apple South's president, S. Kirk Kinsell, states that diversity management can be successful only when it is "integrated fully—that is, made a part of all customer, vendor and employee programs."[187] In addition, as firms continue to become more global, it is important for their training programs to address diversity issues around the world (not just in the United States).

Programs must be fully integrated

Sexual Harassment Training

Most large firms now offer training on sexual harassment issues. In California, training on sexual harassment is mandatory for all supervisors. All different types of organizations have been accused of sexual harassment, from manufacturing (e.g., Mitsubishi Motor Manufacturing of America) to pharmaceuticals (e.g., Astra Pharmaceuticals) to the military (Navy Tailhook incident), where suits were filed, and managers were subsequently fired or reassigned.[188] Training on sexual harassment issues has increased dramatically. The Federal Aviation Administration introduced a training program to respond to women's complaints of harassment.[189] Training has increased in organizations in part due to two 1998 Supreme Court cases. As discussed in Chapter 3, these cases left employers even more vulnerable to sexual harassment lawsuits, and the Court clarified what employers could do to protect themselves against liability. In ***Faragher v. City of Boca Raton*** (1998), the Court sent a message to employers that they must be proactive about sexual harassment by developing a policy and by training employees on it. The City of Boca Raton had a policy on sexual harassment but did little to communicate it to employees. In ***Burlington Industries Inc. v. Ellerth*** (1998), the Supreme Court emphasized that employees with sexual harassment claims should communicate them through existing channels in the company before filing suit. Kimberly Ellerth had not done this. This case pointed out the importance of training employees on the sexual harassment policies and procedures that should be followed when making claims. Most larger firms (over 100 employees) have policies on sexual harassment, but they often do not clearly communicate to or train their employees regarding these policies. Companies such as Texas Instruments and Motorola, however, have provided sexual harassment training classes for a number of years.[190] Some firms have hired outside consultants to conduct the training, while others rely on their own training staffs to develop and deliver the courses.

Description of policy critical

Training on sexual harassment should include a description of the firm's policy, including[191]

- A statement indicating the firm's strong opposition to sexual harassment.
- Definitions of sexual harassment, using examples relevant to employees' jobs. Enough detail should be given so employees understand what "quid-pro-quo" harassment is as well as what constitutes a "hostile environment."

Continual learning

its employees. It should be viewed as a *continual learning* endeavor by employees and managers to stay current and to anticipate future needs. As greater demands are placed on organizations to remain competitive, firms must ensure that their workforces are motivated and able to take on these challenges. An emphasis on continual training and development is one way this can be done. Employees who receive training not only will be more valuable to their firms, but also will earn 30 percent more than those who don't receive such training.[215] Some employers have established their own corporate universities to conduct their own employee continual learning and education. These firms' educational endeavors

Corporate universities

(e.g., Motorola University, Disney University, Intel University, BB&T University, Sprint's University of Excellence, Job Boss University, Sun Microsystems University) are based on the "Corporate Quality University" model for conveying the corporate value of perpetual learning.[216] This model is a guiding philosophy that argues for involving all employees as well as primary customers and suppliers in continual learning to improve overall productivity. Other goals associated with this philosophy are to link training to the strategic directions of the company, to provide an infrastructure for the organization's training initiatives that minimizes duplication, and to form collaborative alliances with employees, suppliers, customers, and academic institutions.[217] The virtual university created by Air Products and Chemicals is another such example that is now available in 40 countries and connects 18,000 people.[218] Figure 8-14 illustrates how some of the training initiatives we have discussed in this chapter can be aligned with the organization's strategy.

Most successful training programs are those that have strong support from top management. Top-level executives (C-level) have been increasingly showing their support for training in several ways (i.e., making public statements in support of learning, participating

Figure 8-14 Strategic Training and Development Initiatives and Their Implications

Strategic Training and Development Initiatives	Implications
Diversify the Learning Portfolio	Use new 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 to 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
	Logically organize and store information
	Provide methods to make information available (e.g., resource guides, Web sites)
Align Training and Development with the Company's Strategic 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

Source: Based on 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.

as a speaker or instructor in sessions, including the learning objectives as part of individuals' performance goals). For example, Bob Stevens, CEO and Chris Kubasik, President and COO of Lockheed Martin, kick off many training programs for their managers by speaking at their programs. Also, successful firms elevate the importance of the training function by having it run by a senior-level officer of the firm. For example, 95 percent of the ASTD BEST firms reported having a C-level officer responsible for learning. This was significantly different from 3 years prior when 70 percent of BEST firms had a C-level person responsible for learning.[219]

Integrate training with career development programs

Many of the most successful U.S. companies have also integrated their training programs with their employee career development programs. In the past, training programs have emphasized employer needs for training in the context of the firm's strategic plan. Career development programs tend to emphasize the employee's perspective. Ideally, training and career planning should be well integrated with a focus on the strategic plan of the organization and customer requirements. Chapter 9 elaborates on these issues.

Discussion Questions

1. Why should a training (or HRD) department develop a mission and goals? Why should these goals be tied to the organization's strategic objectives? How would you ensure that this occurs?
2. Why is e-learning so popular today? What is the future of social media techniques for training? How can we ensure that everyone in the firm is comfortable using these types of techniques?
3. How would you set up a study to evaluate the effects of an online training program versus a lecture-based approach?
4. Why is it important to understand a systems model of training (needs assessment, development, evaluation)? Which aspects are employers most likely to skip when developing training programs? Why is this a problem?
5. Suppose you are instructed to determine whether a training curriculum is needed to address literacy issues in the workplace. How would you conduct the needs assessment? Be specific about the techniques you would use to conduct an organizational, task, and person analysis.
6. You have been contracted to deliver a training program for employees on generational differences in the workplace. You ask the CEO for the results of the needs assessment indicating that this training is needed. You are informed that no needs assessment was performed. How would you respond to this? If you decide to convince the CEO that a needs assessment must be performed, what would you say? If you decide to design the training program, how would you proceed?
7. Results from a preliminary company needs assessment indicate that managers have a negative opinion of the training offered by the firm, think the training is a waste of time, and are resistant to attending future training by the training staff. What additional information would you want to collect from the managers before sending them to a training program? What methods would you use to collect the information? What recommendations would you offer to the firm to ensure that managers still receive future training?
8. Some people say that employees already understand racial and sexual harassment and that we no longer need training for managers. What do you think? Why is this training needed or not needed? Defend your view. If you were to design a program, what would be the major features of a training program designed to make employees and managers aware of racial and sexual harassment issues in the workplace? Whom would you select to attend such a training program and how would you evaluate the effects of the training? Would such training be effective? Explain your answer.

9. Suppose you were going to design a training program for newly hired sales associates for a retail chain. Results from the needs assessment indicate that they would need training on company policies and procedures, selling clothing to customers, and handling customer complaints and returns. What learning principles would you build into the program? What training methods would you choose for your training program? Explain your choices.
10. A group of 60 consultants in a large firm has just completed SAP and PeopleSoft training. You have been called in to evaluate the training. What might you do to evaluate the effectiveness of the training at this point (you were not able to collect any pre-measures with this group)? You did hear that another group of 60 consultants will be attending the same training in 2 months.
11. Describe a number of ideas for building the motivation of trainees *before* and *during* a program. What suggestions would you offer for ensuring that trainees are motivated to transfer their skills *after* they leave the training and are back at their jobs?
12. Why is it important that trainees receive support from others for attending training and applying their training skills? Do you think they often receive the necessary support? Why or why not?
13. Distance learning is becoming the fastest-growing technique for training employees and students. Describe the benefits and drawbacks for distance learning for employees in the workforce. What would be the advantages and disadvantages of a distance education graduate degree program in human resource management or an MBA?
14. What ideas do you have for training employees who are going on an international assignment? What about for those employees coming back to an organization after an international assignment? What issues would you discuss and what techniques would you recommend for both programs?
15. Why is it important to assess the costs and benefits of training?
16. Why is it important to collect multiple criteria to assess the effectiveness of a training program? What if a company insisted that only reactions needed to be collected? How might you convince them of the importance of also collecting learning, behavioral, and results measures?
17. What do you see as the future trends for the field of training?

to help people develop since employees will not be able to rely on organizational growth to provide them new career opportunities and promotions. Line managers will need to provide career counseling to employees, and HR managers must offer training for managers in career coaching skills.[31] For example, the Coca-Cola and Ford career systems require training for all managers in how to conduct career development discussions with employees in the context of performance appraisal. The intention is to make managers more accountable for the development of their employees.[32]

DESIGNING CAREER DEVELOPMENT SYSTEMS

An effective **career development system** integrates *individual career planning* endeavors and *organizational career management* activities. Today, corporations' career development programs (Lincoln Electric, Wal-Mart, IBM, Bell Atlantic, Xerox) involve career assessment by employees with the manager serving as a facilitator and the organization providing a supportive environment. HR specialists can help organizations determine if their firm has a culture that supports career development by administering the Career Development Culture Index shown in Figure 9-3. Low scores reflect ineffective (or nonexistent) career development systems. High scores reflect an effective system likely to correlate with lower voluntary turnover rates.

Figure 9-3 **Twenty Questions: A Career Development Culture Index**

Instructions: If your answer is yes to a question, make a check mark in the space to the left of the number of that item. See the scoring instructions at the end of the exercise.

_____ 1. Does senior management use work assignments and work relationships to develop employees?
_____ 2. Do they do it consciously or intentionally for developing people (as opposed to doing it only for business purposes)?
_____ 3. Are these career development activities part of the business plan for the employee's unit?
_____ 4. Is the organization's purpose expressed in human terms with which employees can identify?
_____ 5. Does top management value employee development?
_____ 6. Is career development owned by senior line management (as opposed to being seen as owned by HR)?
_____ 7. Is diversity actively promoted by senior line management?
_____ 8. Is employee development done by senior line management for the explicit purpose of supporting the business strategy?
_____ 9. Are new forms of employee mobility being used (such as cross-functional, cross-business teams)?
_____ 10. Is personal development or self-knowledge (for example, 360-degree feedback) promoted?
_____ 11. Is career development part of the overall corporate strategy?
_____ 12. Is there a strong succession planning process, which puts emphasis on development as well as identification?
_____ 13. Do employees have significant input to plans for their future development and assignments?
_____ 14. Does career development include opportunities for risk and learning (adaptability)?
_____ 15. Does career development include personal (identity) learning as well as task learning?
_____ 16. Do most people believe that career development should also take family and personal balance needs into account?
_____ 17. Is there general agreement in management about whether historical career development approaches are appropriate for the future?
_____ 18. Is it relatively easy for employees to access information about other job opportunities in the company?
_____ 19. Are employees encouraged to be empowered and self-directed in their careers?
_____ 20. (The acid test): Are individual employees aware of your organization's career development activities?

Scoring:
Add up the number of checks (symbolizing "yes" to the item).

Key:		
	17 or more checks	Outstanding
	10–16	Good
	6–9	Fair
	<5	Work needed!

Source: Z. B. Leibowitz, C. Farren, and B. L. Kaye, *Designing Career Development Systems.* Copyright © John Wiley & Sons 1986. Reprinted with permission of John Wiley & Sons, Inc.