

## 8

# Training Human Resources

*After you have read this chapter, you should be able to:*

- Define training and discuss why a strategic approach is important.
- Discuss the four phases of the training process.
- Identify three types of analyses used to determine training needs.
- Explain different means of internal and external training delivery.
- Describe the importance of e-learning as part of current training efforts.
- Give an example for each of the four levels of training evaluation.

## China's Need for Training



(CNImaging/Newscom)

China has enjoyed an economic bonanza, and with that growth has come a shift toward higher-end manufacturing and services. This shift has led to a greater need for experienced and skilled labor. Local managers need not only technical skills, but skills that are business focused as well. As a result, HR in China faces a large challenge in finding, training, and keeping skilled employees who can thrive in Western-style multinational corporations (MNCs).

China has a workforce of 800 million, but only a small percentage is considered skilled enough to work in MNCs. The Chinese educational system does not teach the range of needed skills, so companies are training workers. A California biomedical testing instrument manufacturer has 270 employees in sales, marketing, and services in China. Five years ago the focus was on technical skills, but now the company wants employees with experience, expertise, and an understanding of the business and relationships.

Chinese culture encourages learning and growing. A Chinese proverb says, "If you want 100 years of prosperity, grow people." And, Chinese employees want the opportunity to be trained. In fact, if they see companies bring in expatriates or non-Chinese workers, they view those companies as having a short-term investment in China and not as likely to be a good place for career growth. Available training is a retention tool that Chinese employees are demanding.

Cisco Systems, which recognized the need to create its own skilled labor pool, now has 220 academies in all provinces in China. The company wants employees to know proposal design, presentation skills, teamwork, products, and sales.

A special administrative region (SAR) of China, Macao, is a good example of an area with specific training needs. Macao's economy is heavily

invested in gaming and the hospitality industry. Hotel and gaming companies have grown their training staffs; at the height of training activities, one hotel resort had 30 full-time training people serving thousands of employees. In the gaming industry, training includes training for dealers, security officers, and supervisors. Training is often done on a 24/7 basis to accommodate various work shifts.

Training has become so prominent in many global companies because it is seen as a worthwhile investment. Companies in the United States also have adopted training as a way to retain their talented employees.<sup>1</sup>

Competition forces business organizations to change and adapt in order to compete successfully. Changes in the way things must be done include training or retraining employees and managers. In this sense, training is an ongoing process for most organizations. Organizations in the United States spend more than \$126 billion annually on training and development, or more than \$1,000 per employee on average.<sup>2</sup>

**Training** is the process whereby people acquire capabilities to perform jobs. Training provides employees with specific, identifiable knowledge and skills for use in their present jobs. Organizational training may include teaching of “hard” skills, such as teaching sales representatives how to use intranet resources, a branch manager how to review an income statement, or a machinist apprentice how to set up a drill press. “Soft” skills are critical in many instances and can be taught as well. These skills may include communicating, mentoring, managing a meeting, and working as part of a team.

## TRAINING AND HR

What kinds of activities usually require training? The most common training topics include, among others, safety, customer service, computer skills, quality initiatives, dealing with sexual harassment, and communication.<sup>3</sup> Training has been studied at length in the United States.<sup>4</sup> The results of these studies show that training is rated as important or very important by 94% of human resources professionals.<sup>5</sup> Further, documented benefits of well-done training include (for both individuals and teams) enhanced skills, greater ability to adapt and innovate, better self-management, and performance improvement. For organizations, research has shown that training brings improvements in effectiveness and productivity, more profitability and reduced costs, improved quality, and increased social capital.

### Training Categories

Training can be designed to meet a number of objectives and can be classified in various ways. As Figure 8-1 shows, some common groupings include the following:

- *Required and regular training:* Complies with various mandated legal requirements (e.g., OSHA and EEO) and is given to all employees (e.g., new employee orientation)

**Training** Process whereby people acquire capabilities to perform jobs.

FIGURE 8-1

## Types of Training



- *Job/technical training*: Enables employees to perform their jobs well (e.g., product knowledge, technical processes and procedures, customer relations)
- *Developmental and career training*: Provides longer-term focus to enhance individual and organizational capabilities for the future (e.g., business practices, executive development, organizational change, leadership)
- *Interpersonal and problem-solving training*: Addresses both operational and interpersonal problems and seeks to improve organizational working relationships (e.g., interpersonal communication, managerial/supervisory skills, conflict resolution)

It is common for a distinction to be drawn between *training* and *development*, with development being broader in scope and focusing on individuals' gaining new capabilities useful for both present and future jobs. Development is discussed in Chapter 9; training is the focus of this chapter.

## Legal Issues and Training

A number of legal issues must be considered when designing and delivering training. One concern centers on the criteria and practices used to select individuals

for inclusion in training programs. Companies need to make sure those criteria are job related and do not unfairly restrict the participation of protected-category members. Also, failure to accommodate the participation of individuals with disabilities in training can expose organizations to EEO lawsuits.

Another legal issue is employers' requiring employees to sign *training contracts* in order to protect the costs and time invested in specialized employee training. For instance, a telecommunications firm paid \$17,000 each to train four network technicians and certify them in specialized equipment. The firm required that each technician sign a training contract whereby one-fourth of the cost would be forgiven each year the employee stayed following the training. A technician who left sooner would be liable to the firm for the

unforgiven balance. Health care organizations, IT firms, and other employers often use training contracts, especially for expensive external training.

Finally, the Department of Labor has ruled that employees who are training outside normal working hours (e.g., at home by completing Web-based classes) must be compensated for their time. In one situation, a Web-based class required employees to spend about 10 hours at home completing it; once they did, they performed their job duties better. In this case, the company had to pay the employees for their 10 hours of training under the Fair Labor Standards Act.<sup>6</sup>



#### LOGGING ON

##### American Society for Training & Development

This website on training and development contains information on research, education, seminars, and conferences. Visit the site at [www.astd.org](http://www.astd.org).

## ORGANIZATIONAL STRATEGY AND TRAINING

Training represents a significant expenditure for most employers. But it is too often viewed tactically rather than strategically, which means that training is seen as a short-term activity rather than one that has longer-term effects on organizational success. However, this is changing. For example, during the last recession, unlike previous recessions, some companies chose to maintain training that was necessary for long-term strategic goals.<sup>7</sup>

### Strategic Training

Training is used strategically to help the organization accomplish its goals. For example, if sales increases are a critical part of the company's strategy, appropriate training would identify what is causing lower sales and target training to respond as part of a solution.<sup>8</sup>

Strategic training can have numerous organizational benefits. It requires HR and training professionals to get intimately involved with the business and to partner with operating managers to help solve their problems, thus making significant contributions to organizational results. Additionally, a strategic training mind-set reduces the likelihood of thinking that training alone can solve most employee or organizational problems. It is not uncommon for operating managers and trainers to react to most important performance problems by saying, "I need a training program on X." With a strategic focus, the organization is more likely to assess whether training actually can address the most important performance issues and what besides training is needed. Training cannot fix all organizational problems.

The value of training can be seen at Walt Disney World where the company has established specific training plans. The implementation of those

training plans results in a distinct competitive advantage for the organization. For example, at the Disney Institute, employees (called “cast members”) get training experience from their guests’ perspectives. As a part of their training, individuals taking hotel reservations stay at a resort as guests in order to gain greater understanding of what they are selling and to experience the services themselves.

## Organizational Competitiveness and Training

General Electric, Dell Computers, Motorola, Marriott, Cisco, FedEx, and Texas Instruments all emphasize the importance of training employees and managers. These companies and others recognize that training efforts can be integral to business success. In a sense, for these companies, training is similar to the “continuous improvement” practiced by some manufacturing firms.

The nature of technological innovation and change is such that if employees are not trained all the time, they may fall behind and the company could become less competitive. For example, consider the telecommunications industry today compared with ten years ago, with all the new technologies and the accompanying competitive shifts. Without continual training, organizations may not have staff members with the knowledge, skills, and abilities (KSAs) needed to compete effectively.

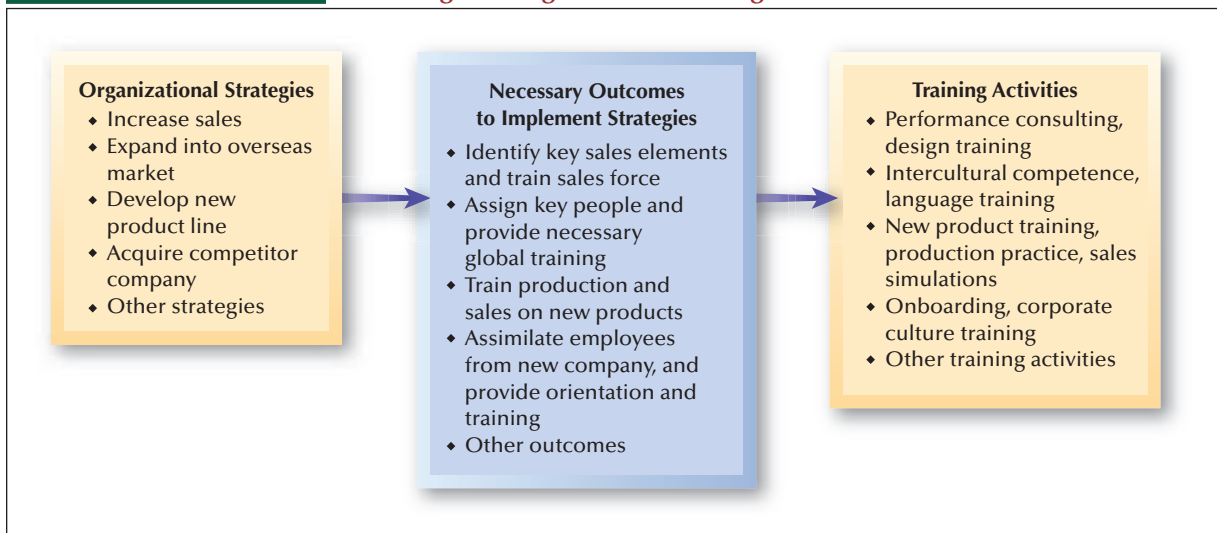
Training also can affect organizational competitiveness by aiding in the retention of employees. One reason why many individuals stay or leave organizations is career training and development opportunities. Employers that invest in training and developing their employees may enhance retention efforts.

Figure 8-2 shows how training may help accomplish certain organizational strategies. Ideally, upper management sees the training function as providing valuable intelligence about the necessary core skills.

**Knowledge Management** For much of history, competitive advantage among organizations was measured in terms of physical capital. However, as

**FIGURE 8-2**

### Linking Strategies and Training





the information age has evolved, “intelligence” has become the raw material that many organizations make and sell through their “knowledge workers.”<sup>9</sup> **Knowledge management** is the way an organization identifies and leverages knowledge in order to be competitive. It is the art of creating value by using organizational intellectual capital, which is what the organization (or, more exactly, the people in the organization) knows. Knowledge management is a conscious effort to get the right knowledge to the right people at the right time so that it can be shared and put into action.

**Training as a Revenue Source** Some organizations have identified that training can be a source of business revenue. For instance, Microsoft, Ceridian, Cisco, Hewlett-Packard, and other technology firms bundle customer training with products and services they sell. Also, manufacturers of industrial equipment offer customers training on machine upgrades and new features. Customers of many of these firms pay for additional training either by course, by participant, or as part of equipment or software purchases. Not only are the costs of the trainers’ salaries, travel, and other expenses covered, but the suppliers also make a profit on the training through the fees paid by customers. As a side benefit, customer satisfaction and loyalty increase if customers know how to use the products and services purchased. Thus, customer training aids customer retention and enhances future sales revenues.

**Performance Consulting** Training should result in improved organizational performance. For some companies, ensuring that it does requires a “performance consulting” approach. **Performance consulting** is a process in which a trainer (either internal or external to the organization) and an organization work together to decide how to improve organizational and individual results.<sup>10</sup> That may or may not include training. Performance consulting takes a broad approach by:

- Focusing on identifying and addressing root causes of performance problems
- Recognizing that the interaction of individual and organizational factors influences employee performance
- Documenting the actions and accomplishments of high performers and comparing them with actions and accomplishments of more typical performers

Regardless of whether the trainer is an internal employee or an outside consultant, a performance consulting approach recognizes that training alone cannot automatically solve every employer performance problem. Instead, training is one piece of a larger “bundled solution.” For instance, some employee performance issues might be resolved by creating a training program for employees, and others might call for compensation adjustments, job design changes, or reassignment.

**Integration of Performance with Training** Job performance, training, and employee learning must be integrated to be effective, and HR plays a crucial role in this integration.<sup>11</sup> Organizations find that training experiences that use real business problems to advance employee learning are better than more traditional approaches. Rather than separating the training experience from the context of actual job performance, trainers incorporate everyday business issues as learning examples, thus increasing the realism of training exercises and scenarios. For example, as part of management training at

### Knowledge management

The way an organization identifies and leverages knowledge in order to be competitive.

### Performance consulting

Process in which a trainer and an organization work together to decide how to improve organizational and individual results.

## Business Education at Work



The following is a first-person account from an employee of Graybar Electric Company (an employee-owned company), as she related her experience in a “Mini MBA” set up by Rutgers University. This training program is an excellent example of integrating performance and training.

My employer teamed with Rutgers to produce a new management training program to provide a broad base of business knowledge. Graybar has a long history of promoting people from within and needed a program like this. I was a senior attorney on the company’s legal team, and ready for more business education. The training program includes face-to-face meetings as well as online communication. We do most of our work in cross-functional teams. My team in addition to myself includes Graybar employees from Canada (Vice President), Pittsburgh (Operations Manager), and Alabama (Branch Manager). We learn from each other as well as from the formal instruction.

Technology includes e-mail, instant messaging, Webinars, podcasts, conference calls, and the Internet. There are no regularly scheduled classes; we are responsible for reading and finishing

assignments at our own pace. For example, a recent assignment was to listen to a podcast by a CEO of an international advertising agency on customer loyalty creation. Our team then drafted an article for the company newsletter, discussing the Graybar brand and how to strengthen the value of the brand with the customers. In another assignment, each team completed an assignment on ethics. The team members identified an ethical issue and designed a 10-minute employee training module based on that incident. This required learning the ethical concepts and translating them into an informative program for employees.

If you take a class at a local college, perhaps you can apply 20% of what you learn to your job. With this program, I probably apply 80–90% directly to my job. We examine real-world challenges affecting Graybar’s strategy. The work done by the student is actually used to guide the company’s future, as the hands-on learning is presented to senior managers as part of the final exam.<sup>12</sup>

*Note:* At this writing, Beverly Propst is Vice President of Human Resources at Graybar Electric.

General Electric, managers are given actual business problems to solve, and they must present their solutions to the business leaders in the firm. Using real situations for practice is yet another way of merging the lines between training, learning, and job performance. For another example, see HR Perspective: Business Education at Work.

**Chief Learning Officers** To emphasize the importance of training and to have internal performance consulting expertise, some organizations have created a position entitled *chief learning officer (CLO)* or *chief knowledge officer (CKO)*. Ideally, the CLO is not just a training director with an inflated new title, but rather a leader who designs knowledge through training for individual employees and the organization. CLOs must demonstrate a high level of comfort in working with boards of directors and the top management team, a track record of success in running some type of business unit, and an understanding of adult learning technologies and processes. If they possess these characteristics, CLOs can take the lead in developing strategic training plans for their organizations.



## TRAINING FOR GLOBAL STRATEGIES



For a global firm, the most brilliant strategies ever devised will not work unless the company has well-trained employees throughout the world to carry them out. A global look at training is becoming more crucial as firms establish and expand operations worldwide. For U.S. employers, the challenge has increased. According to a report, the number of U.S. job skills certifications declined 18% in one year, while there was a 47% increase in similar certifications in India. The conclusion of the study was that U.S. firms may not remain innovative and strategic leaders much longer, due to the decline in specialized skilled and technical workers.<sup>13</sup> Add this problem to the number of global employees with international assignments, and training must be seen as part of global strategic success.<sup>14</sup>

### Global Assignment Training

The orientation and training that expatriates and their families receive before departure significantly affect the success of an overseas assignment. When such programs are offered, most expatriates participate in them, and the programs usually produce a positive effect on cross-cultural adjustment. Also, training helps expatriates and their families adjust to and deal with host-country counterparts. A recent survey showed that companies recognize their expatriates often are well trained in skills and technical capabilities but much less well trained in knowledge of the host country culture.<sup>15</sup>

A related issue is the promotion and transfer of foreign citizens to positions in the United States. For example, many Japanese firms operating in the United States conduct training programs to prepare Japanese people for the food, customs, labor and HR practices, and other facets of working and living in the United States. As more global organizations start or expand U.S. operations, more cross-cultural training will be necessary for international employees relocated to the United States.<sup>16</sup>

### Intercultural Competence Training

Global employers are providing intercultural competence training for their global employees. Intercultural competence incorporates a wide range of human social skills and personality characteristics. As noted in Figure 8-3, three components of intercultural competence require attention when training expatriates for global assignments:

- *Cognitive*: What does the person know about other cultures?
- *Emotional*: How does the person view other cultures, and how sensitive is the person to cultural customs and issues?
- *Behavioral*: How does the person act in intercultural situations?

Increasingly, global employers are using training methods that allow individuals to behave in international situations and then receive feedback.<sup>17</sup> One method is the Culture Assimilator. Used worldwide, especially by European-based firms, the Culture Assimilator is a programmed training and learning method consisting of short case studies and critical incidents. The case studies describe intercultural interactions and potential misunderstandings involving expatriates and host-country nationals.

FIGURE 8-3

## Intercultural Competence Training

COMPONENT	POSSIBLE TRAINING
Cognitive	<ul style="list-style-type: none"> <li>◆ Culture-specific training (traditions, history, cultural customs, etc.)</li> <li>◆ Language course</li> </ul>
Emotional	<ul style="list-style-type: none"> <li>◆ <i>Uneasiness</i>: Social skills training focusing on new/unclear and intercultural situations</li> <li>◆ <i>Prejudices</i>: Coaching may be clarifying</li> <li>◆ <i>Sensitivity</i>: Communication skills course (active listening, verbal/nonverbal cues, empathy)</li> </ul>
Behavioral	<ul style="list-style-type: none"> <li>◆ Culture Assimilator method</li> <li>◆ International projects</li> <li>◆ Social skills training focusing on intercultural situations</li> </ul>

Source: Developed by Andrea Graf, PhD, and Robert L. Mathis, PhD, SPHR.

## PLANNING FOR TRAINING

Whether global or national in scope, training benefits from careful planning before it is done. Planning includes looking at the “big picture” in which the training takes place as well as specifics for the design of a particular training effort. For example, the needs for skills have changed over time and things like adaptability, problem solving, and professionalism have increased in value in some firms.<sup>18</sup> Planning to design training to include changes such as these makes for a more effective training program.

Another training planning issue for some companies is knowledge retention for the firm. When retirees leave, they take everything they have learned during a career. Perhaps a retiree is the only one in the company who knows how to operate a piece of machinery or mix a chemical solution. In some areas technology changes so fast that even young people leaving a company may take with them information that cannot easily be replicated. Companies are responding to this knowledge retention need in various ways, including identifying critical employees, having existing critical employees train and mentor others, producing how-to videotapes, and keeping former employees on call for a period of time after their departure.<sup>19</sup>

Training plans allow organizations to identify what is needed for employee performance *before* training begins so that a fit between training and strategic issues is made.<sup>20</sup> Effective training efforts consider the following questions:

- Is there really a need for the training?
- Who needs to be trained?
- Who will do the training?
- What form will the training take?
- How will knowledge be transferred to the job?
- How will the training be evaluated?

## Orientation: Planning for New Employees

A good example of one kind of training that requires planning is orientation. Also called “onboarding,” orientation is the most important and widely conducted type of regular training done for new employees. **Orientation**, which is the planned introduction of new employees to their jobs, coworkers, and the organization, is offered by most employers. It requires cooperation between individuals in the HR unit and operating managers and supervisors. In a small organization without an HR department, the new employee’s supervisor or manager usually assumes most of the responsibility for orientation. In large organizations, managers and supervisors, as well as the HR department, generally work as a team to orient new employees. Unfortunately, without good planning, new employee orientation sessions can come across as boring, irrelevant, and a waste of time to both new employees and their department supervisors and managers.

Solid academic research indicates that orientation (institutionalized socialization tactics) can be effective—if done well. Orientation reduces role ambiguity, role conflict, and intention to quit; and it increases perceptions of fit, job satisfaction, commitment, and performance.<sup>21</sup> Studies and observations by practicing managers and HR managers confirm this.<sup>22</sup> In addition, evidence from the public sector shows how important orientation is *if done well*.<sup>23</sup> Planning for orientation is reviewed in HR On-the-Job.

Among the decisions to be made during planning are what to present and also, equally important, *when* to present it. Too much information on the first

**Orientation** Planned introduction of new employees to their jobs, coworkers, and the organization.

### Planning for New Employee Orientation

Effective new employee orientation requires planning and preparation. Unfortunately, orientation often is conducted rather haphazardly. To make orientation more effective, the following planning suggestions are useful:

- *Prepare for new employees.* New employees must feel that they belong and are important to the organization. The supervisor, HR unit, and coworkers should be prepared for a new employee’s arrival.
- *Consider using mentors.* Some organizations assign coworkers or peers to serve as buddies or mentors as part of the new employees’ orientation.
- *Use an orientation checklist.* An orientation checklist can be used to identify what the new employee needs to know now and later.
- *Cover needed information at the proper time.* It is important to give employees information on the policies, work rules, and benefits of the company *when* they need it. What do they need on the first day? What later?
- *Present orientation information effectively.* Managers and HR representatives should determine the most appropriate ways to present orientation information both in person and using technological means.
- *Avoid information overload.* One common failing of many orientation programs is information overload. New workers presented with too many facts may ignore or inaccurately recall much of the information.
- *Evaluate and follow up.* An HR representative or manager can evaluate the effectiveness of the orientation by conducting follow-up interviews with new employees a few weeks or months after the orientation.



day leads to perceptions of ineffective onboarding. Several shorter sessions over a longer period of time, bringing in information as it is needed, are more effective. Effective orientation achieves several key purposes:

- Establishes a favorable employee impression of the organization and the job
- Provides organization and job information
- Enhances interpersonal acceptance by coworkers
- Accelerates socialization and integration of the new employee into the organization
- Ensures that employee performance and productivity begin more quickly

**Electronic Orientation Resources** One way of expanding the efficiency of orientation is to use electronic resources. Estimates are that more than 80% of employers have implemented electronic onboarding activities to improve their employee orientation efforts.<sup>24</sup> A number of employers place general employee orientation information on company intranets or corporate websites. New employees log on and go through much of the general material on organizational history, structure, products and services, mission, and other background, instead of sitting in a classroom where the information is delivered in person or by videotape. Specific questions and concerns can be addressed by HR staff and others after employees have reviewed the Web-based information.<sup>25</sup>

Other companies use electronic resources a bit differently. For example, at Mirage Resorts, when candidates accept an offer, they get an e-mail with a link to a password-protected website that welcomes them, and they fill out their I-9, W-2, and other forms on that website. Before reporting to work, they get e-mails daily explaining where to park, where to get uniforms, and where to drop off their dry cleaning. Assigning a desk, getting a computer and security clearance, and many other orientation tasks are all done before the first day on the job by electronic onboarding.<sup>26</sup>



## Evaluating Orientation and Metrics

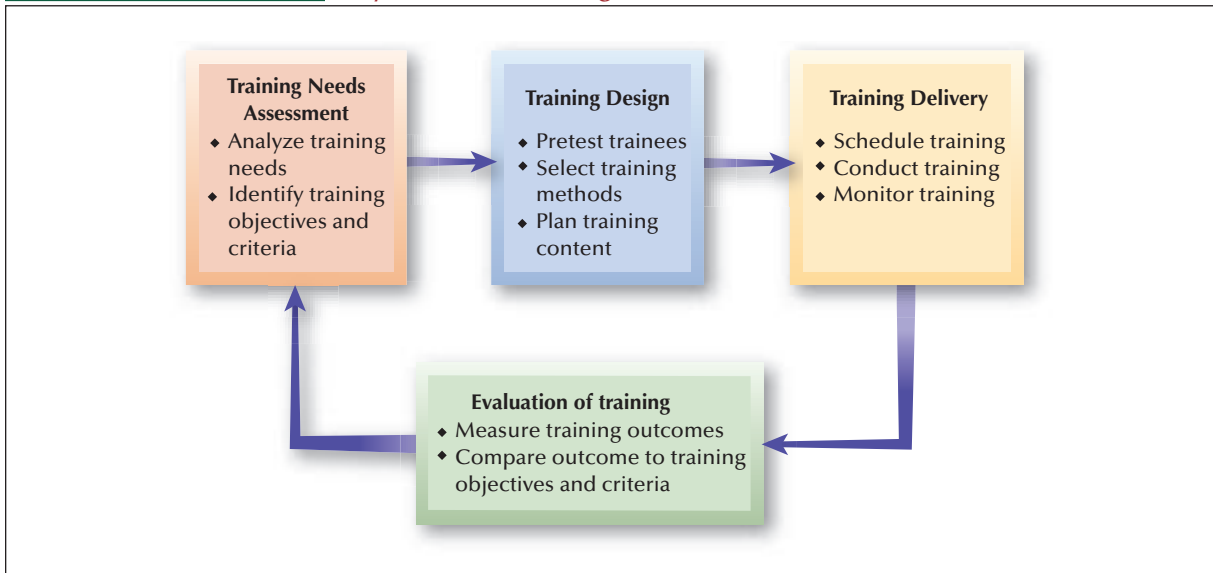
Although orientation is important and can provide many advantages for both the organization and the new employee, it is not always done well. To determine the effectiveness of an orientation training program, evaluation using specific metrics is appropriate. Measurement should be made of the success of both the orientation program *and* the new hires themselves. Suggested metrics include:<sup>27</sup>

- *Tenure turnover rate*                      What percentage of new hires of 6 months or less left the organization?
- *New hires failure factor*                What percentage of the total annual turnover was new hires?
- *Employee upgrade rate*                 What percentage of new employees received a higher performance rating than previously?
- *Development program participation rate*      What percentage of new employees have moved on to training for or promotion to higher jobs?

Successfully integrating new hires is important, and measuring the degree of success allows the orientation program to be managed.

The way in which a firm plans, organizes, and structures its training affects the way employees experience the training, which in turn influences the

FIGURE 8-4

**Systematic Training Process**

effectiveness of the training. Effective training requires the use of a systematic training process. Figure 8-4 shows the four phases of a systematic approach: assessment, design, delivery, and evaluation. Using such a process reduces the likelihood that unplanned, uncoordinated, and haphazard training efforts will occur. A discussion of the training process follows.

## TRAINING NEEDS ASSESSMENT

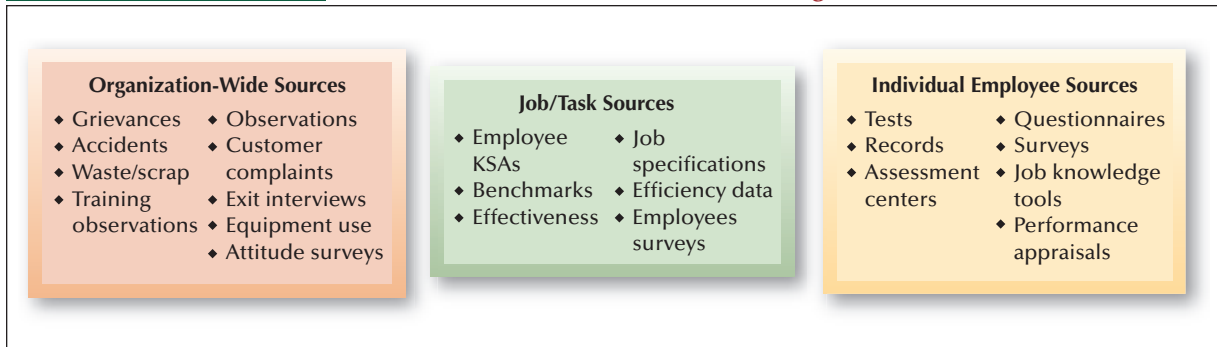
Assessing organizational training needs is the diagnostic phase of a training plan. This assessment considers issues of employee and organizational performance to determine if training can help. Needs assessment measures the competencies of a company, a group, or an individual as they relate to what is required. It is necessary to find out what is happening and what should be happening before deciding if training will help, and if it will help, what kind is needed. For instance, suppose that in looking at the performance of clerks in a billing department, a manager identifies problems that employees have with their data-entry and keyboarding abilities, and she decides that they would benefit from instruction in these areas. As part of assessing the training needs, the manager has the clerks take a data-entry test to measure their current keyboarding skills. Then the manager establishes an objective of increasing the clerks' keyboarding speed to 60 words per minute without errors. The number of words per minute without errors is the criterion against which training success can be measured, and it represents the way in which the objective is made specific.

### Analysis of Training Needs

The first step in training needs assessment is analyzing what training might be necessary. Figure 8-5 shows the three sources used to analyze training needs.

FIGURE 8-5

## Sources of Information for Training Needs Assessment



**Organizational Analysis** Training needs can be diagnosed by analyzing organizational outcomes and looking at future organizational needs. A part of planning for training is the identification of the KSAs that will be needed now and in the future as both jobs and the organization change. Both internal and external forces will influence training and must be considered when doing organizational analysis. For instance, the problems posed by the technical obsolescence of current employees and an insufficiently educated labor pool from which to draw new workers should be confronted before those issues become critical.

Organizational analysis comes from various operational measures of organizational performance. Departments or areas with high turnover, customer complaints, high grievance rates, high absenteeism, low performance, and other deficiencies can be pinpointed. Following identification of such problems, training objectives can be developed if training is a solution. During organizational analysis, focus groups of managers can be used to evaluate changes and performance that might require training.

**Job/Task Analysis** The second way of analyzing training needs is to review the jobs involved and the tasks performed in those jobs. By comparing the requirements of jobs with the KSAs of employees, training needs can be identified. For example, at a manufacturing firm, analysis identified the tasks performed by engineers who served as technical instructors for other employees. By listing the tasks required of a technical instructor, management established a program to teach specific instructional skills; thus, the engineers were able to become more successful instructors.

Another way to pinpoint training gaps in the job or the task being done is to survey employees and have them anonymously evaluate the skill levels of their peers and estimate the skill levels necessary to be successful. This not only identifies job needs but also heightens employees' awareness of their own learning needs.<sup>28</sup> A training needs survey can take the form of questionnaires or interviews with supervisors and employees individually or in groups. The growth of the Internet has resulted in firms using Web-based surveys, requests, and other inputs from managers and employees to identify training needs or jobs.

A good example of needs assessment for a particular job occurred in the construction industry where there was a rash of accidents among Spanish-speaking construction workers. Construction companies recognized the need for training in English as a second language for many people. Restaurants, hospitals, and hotels have faced the same issue for certain (but not all) jobs.<sup>29</sup>



**Individual Analysis** The third means of diagnosing training needs focuses on individuals and how they perform their jobs. The following sources are examples that are useful for individual analysis:

- Performance appraisals
- Skill tests
- Individual assessment tests
- Records of critical incidents
- Assessment center exercises
- Questionnaires and surveys
- Job knowledge tools
- Internet input

The most common approach for making individual analysis is to use performance appraisal data. In some instances, a good HR information system can be used to identify individuals who require training in specific areas in order to be eligible for promotion. To assess training needs through the performance appraisal process, the organization first determines an employee's performance strengths and inadequacies in a formal review. Then it can design some type of training to help the employee overcome the weaknesses and enhance the strengths.

Another way of assessing individual training needs is to use both managerial and nonmanagerial input about what training is needed. Obtaining this kind of input can be useful in building support for the training from those who will be trained, as they help to identify training needs.

Tests can be a good means of individual-level analysis. For example, a police officer might take a qualification test with her service pistol every 6 months to indicate the officer's skill level. If an officer cannot qualify, training certainly would be necessary.

## Establishing Training Objectives and Priorities

Once training requirements have been identified using needs analyses, training objectives and priorities can be established by a "gap analysis," which indicates the distance between where an organization is with its employee capabilities and where it needs to be. Training objectives and priorities are then determined to close the gap. Three types of training objectives can be set:

- *Attitude*: Creating interest in and awareness of the importance of something (e.g., sexual harassment training)
- *Knowledge*: Imparting cognitive information and details to trainees (e.g., understanding how a product works)
- *Skill*: Developing behavioral changes in how jobs and various task requirements are performed (e.g., improving speed on an installation)

The success of training should be measured in terms of the objectives that were set for it. Useful objectives are measurable. For example, an objective for a new sales clerk might be to "demonstrate the ability to explain the function of each product in the department within two weeks." This objective checks *internalization*, that is, whether the person really learned the training content and is able to use the training.

Because training seldom is an unlimited budget item and because organizations have multiple training needs, prioritization is necessary. Ideally, management looks at training needs in relation to strategic organizational plans and as part of the organizational change process. Then the training needs can be prioritized based on organizational objectives. Conducting the training most needed to improve the performance of the organization will produce visible results more quickly.

## TRAINING DESIGN

Once training objectives have been determined, training design can start. Whether job-specific or broader in nature, training must be designed to address the specific objectives. Effective training design considers the learners, instructional strategies, and how best to get the training from class to the job.

Working in organizations should be a continual learning process. Different approaches are possible because learning is a complex psychological process. Each of the elements shown in Figure 8-6 must be considered for the training design to be effective and produce learning.

### Learner Characteristics

For training to be successful, learners must be ready and able to learn. Learner readiness means that individuals have the ability to learn, which many people certainly have. However, individuals also must have the motivation to learn, have self-efficacy, see value in learning, and have a learning style that fits the training.

**Ability to Learn** Learners must possess basic skills, such as fundamental reading and math proficiency, and sufficient cognitive abilities. Companies may discover that some workers lack the requisite skills to comprehend their training. Some have found that a significant number of job applicants and current employees lack the reading, writing, and math skills needed to learn the jobs. Employers might deal with the lack of basic employee skills in several ways:

- Offer remedial training to people in the current workforce who need it.
- Hire workers who are deficient and then implement specific workplace training.<sup>30</sup>
- Work with local schools to help better educate potential hires for jobs.

FIGURE 8-6

### Training Design Elements



**Motivation** A person’s desire to learn training content, referred to as “motivation to learn,” is influenced by multiple factors. For example, differences in gender and ethnicity and the resulting experiences may affect the motivation of adult learners. The student’s motivational level also may be influenced by the instructor’s motivation and ability, friends’ encouragement to do well, classmates’ motivational levels, the physical classroom environment, and the training methods used.<sup>31</sup> Regardless of what the motivation is, without it, the student will not learn the material.

**Self-Efficacy** Learners must possess **self-efficacy**, which refers to people’s belief that they can successfully learn the training program content. For learners to be ready for and receptive to the training content, they must feel that it is possible for them to learn it. As an example, some college students’ levels of self-efficacy diminish in math or statistics courses when they do not feel adequately able to grasp the material. These perceptions may have nothing to do with their actual ability to learn, but rather reflect the way they see themselves and their abilities. Instructors and trainers must find appropriate ways to boost the confidence of trainees who are unsure of their learning abilities because people with a high level of belief that they can learn perform better and are more satisfied with the training they receive.

**Perceived Utility/Value** Training that is viewed as useful is more likely to be tried on the job. Perceived utility or value of training is affected by a need to improve, the likelihood that training will lead to improvement, and the practicality of the training for use on the job. Learners must perceive a close relationship between the training and things they want for it to be successful.

**Learning Styles** People learn in different ways. For example, *auditory* learners learn best by listening to someone else tell them about the training content. *Tactile* learners must “get their hands on” the training resources and use them. *Visual* learners think in pictures and figures and need to see the purpose and process of the training. Trainers who address all these styles by using multiple training methods can design more effective training.

Training design also must sometimes address special issues presented by **adult learning**. Certainly, the training design must consider that all the trainees are adults, but adults come with widely varying learning styles, experiences, and personal goals. For example, training older adults in technology may require greater attention to explaining the need for changes and to enhancing the older trainees’ confidence and abilities when learning new technologies. In contrast, younger adults are more likely to be familiar with new technology because of their earlier exposure to computers and technology.

Malcolm Knowles’s classic work on adult learning suggests five principles for designing training for adults.<sup>32</sup> According to that work and subsequent work by others, adults:

- Have the need to know why they are learning something.
- Have a need to be self-directed.
- Bring more work-related experiences into the learning process.
- Enter into a learning experience with a problem-centered approach to learning.
- Are motivated to learn by both extrinsic and intrinsic factors.

**Self-efficacy** People’s belief that they can successfully learn the training program content.

**Adult learning** Ways in which adults learn differently than younger people.



#### LOGGING ON

##### **Learnativity.com**

For articles and other resources on adult learning, training, and evaluation, visit this website at [www.learnativity.com](http://www.learnativity.com).

## Instructional Strategies

An important part of designing training is to select the right mix of strategies to fit the learners' characteristics. Practice/feedback, overlearning, behavioral modeling, error-based examples, and reinforcement/immediate confirmation are some of the prominent strategies available in designing the training experience.

**Practice/Feedback** For some kinds of training, it is important that learners practice what they have learned and get feedback on how they have done so they can improve. **Active practice** occurs when trainees perform job-related tasks and duties during training. It is more effective than simply reading or passively listening. For instance, assume a person is being trained as a customer service representative. After being given some basic selling instructions and product details, the trainee calls a customer and uses the knowledge received.

Active practice can be structured in two ways. The first, **spaced practice**, occurs when several practice sessions are spaced over a period of hours or days. The second, **massed practice**, occurs when a person performs all the practice at once. Spaced practice works better for some types of skills and for physical learning that requires muscle memory, whereas massed practice is usually more effective for other kinds of learning, such as memorizing tasks. Imagine the difficulty of trying to memorize the lists of options for 20 dishwasher models if memorized at a rate of one model a day for 20 days. By the time the appliance distribution salespeople had learned the last option, they likely would have forgotten the first one.

**Overlearning** Overlearning is repeated practice even after a learner has mastered the performance. It may be best used to instill “muscle memory” for a physical activity in order to reduce the amount of thinking necessary and make responses automatic. But overlearning also produces improvement in learner retention. Research suggests that even with overlearning, refreshers are still sometimes necessary to reduce the effect of response delay.<sup>33</sup>

**Behavioral Modeling** The most elementary way in which people learn—and one of the best—is through **behavioral modeling**, or copying someone else's behavior. The use of behavioral modeling is particularly appropriate for skill training in which the trainees must use both knowledge and practice. It can aid in the transfer of skills and the usage of those skills by those who are trained.<sup>34</sup> For example, a new supervisor can receive training and mentoring on how to handle disciplinary discussions with employees by observing as the HR director or department manager deals with such problems.

Behavioral modeling is used extensively as the primary means for training supervisors and managers in interpersonal skills. Fortunately or unfortunately, many supervisors and managers end up modeling behaviors they see their bosses use. For that reason, supervisor training should include good role models to show how to handle interpersonal interactions with employees.

**Error-Based Examples** The error-based examples method involves sharing with learners what can go wrong when they do not use the training properly. A good example is sharing with pilots what can happen when they are not aware of a situation they and their aircraft are entering. Situational awareness training that includes error-based examples has been shown to improve air crew situational awareness.<sup>35</sup> Error-based examples have been incorporated in military, firefighting, and police training as well as aviation training. Case studies that show negative consequences of errors are a good tool for communicating error-based examples.

### Active practice

Performance of job-related tasks and duties by trainees during training.

### Spaced practice

Practice performed in several sessions spaced over a period of hours or days.

### Massed practice

Practice performed all at once.

### Behavioral modeling

Copying someone else's behavior.

**Reinforcement and Immediate Confirmation** The concept of **reinforcement** is based on the *law of effect*, which states that people tend to repeat responses that give them some type of positive reward and to avoid actions associated with negative consequences. Positively reinforcing correct learned responses while providing negative consequences at some point for wrong responses can change behavior. Closely related is an instructional strategy called **immediate confirmation**, which is based on the idea that people learn best if reinforcement and feedback are given as soon as possible after training. Immediate confirmation corrects errors that, if made throughout the training, might establish an undesirable pattern that would need to be unlearned. It also aids with the transfer of training to the actual work done.

## Transfer of Training

Finally, trainers should design training for the highest possible transfer from the class to the job. Transfer occurs when trainees actually use on the job what knowledge and information they learned in training. The amount of training that effectively gets transferred to the job is estimated to be relatively low, given all the time and money spent on training. It is estimated that about 40% of employees apply training to their jobs immediately after training. Among those who do not use the training immediately, the likelihood of it being used decreases over time.<sup>36</sup>

Effective transfer of training meets two conditions. First, the trainees can take the material learned in training and apply it to the job context in which they work. Second, employees maintain their use of the learned material over time. A number of things can increase the transfer of training. Offering trainees an *overview of the training content* and how it links to the strategy of the organization seems to help with both short-term and longer-term training transfer. Another helpful approach is to ensure that the *training mirrors the job* context as much as possible. For example, training managers to be better selection interviewers should include role-playing with “applicants” who respond in the same way that real applicants would.

One of the most consistent factors in training transfer is the *support* new trainees receive *from their supervisors* to use their new skills when they return to the job.<sup>37</sup> Supervisor support of the training, feedback from the supervisor, and supervisor involvement in training are powerful influences in transfer.

*Opportunity to use the training* also is important. To be trained on something but never to have the opportunity to use it obviously limits transfer. Learners need the opportunity to use new skills on the job if the skills are to remain.

Finally, *accountability* helps transfer training from class to job. Accountability is the extent to which someone expects the learner to use the new skills on the job and holds them responsible for doing so. It may require supervisory praise for doing the task correctly and sanctions for not showing proper trained behavior, but making people accountable for their own trained behavior is effective.<sup>38</sup>

**Reinforcement** Based on the idea that people tend to repeat responses that give them some type of positive reward and to avoid actions associated with negative consequences.

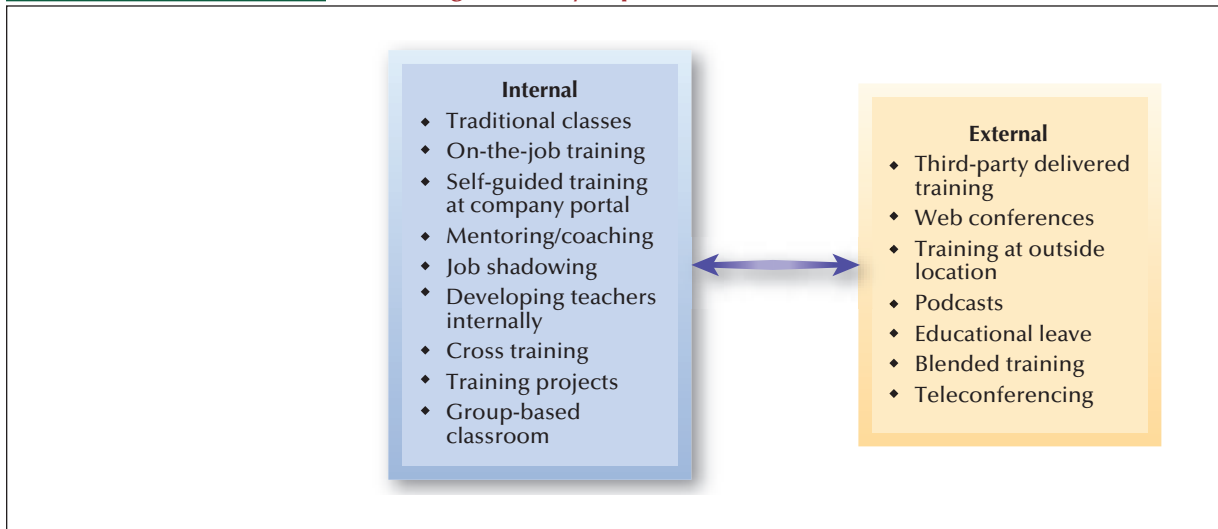
**Immediate confirmation** Based on the idea that people learn best if reinforcement and feedback are given as soon as possible after training.

## TRAINING DELIVERY

Once training has been designed, the actual delivery of training can begin. Regardless of the type of training done, a number of approaches and methods can be used to deliver it. The growth of training technology continues to expand the available choices, as Figure 8-7 shows.

FIGURE 8-7

## Training Delivery Options



Whatever the approach used, a variety of considerations must be balanced when selecting training delivery methods. The common variables considered are:

- Nature of training
- Subject matter
- Number of trainees
- Individual versus team
- Self-paced versus guided
- Training resources/costs
- E-learning versus traditional learning
- Geographic locations
- Time allotted
- Completion timeline

To illustrate, a large firm with many new hires may be able to conduct employee orientation using the Internet, videotapes, and specific HR staff members, while a small firm with few new hires may have an HR staff member meet individually with the new hires for several hours. A medium-sized company with three locations in a geographic area may bring supervisors together for a two-day training workshop once a quarter. However, a large, global firm may use Web-based courses to reach supervisors throughout the world, with content available in several languages. Frequently training is conducted internally, but some types of training use external or technological training resources.

Further, training can be formal or informal. Formal training is very visible, as it consists of planned learning activities. Informal training takes place when learning may not be the primary focus, but it occurs anyway. The informal learning may be the result of some sort of self-initiated effort or simply serendipitous, but it often occurs as needed.<sup>39</sup>

## Internal Training

Internal training generally applies very specifically to the organization and its jobs. It is popular because it saves the cost of sending employees away for training and often avoids the cost of outside trainers. Skills-based technical training is usually conducted inside organizations. Training materials are often created internally as well.<sup>40</sup> Due to rapid changes in technology, the building and updating of technical skills may become crucial internal training needs.



Basic technical skills training is also being mandated by federal regulations in areas where the Occupational Safety and Health Administration (OSHA), the Environmental Protection Agency (EPA), and other agencies have jurisdiction. Three types of internal delivery options will be discussed here: informal training, on-the-job training (OJT), and cross training.

**Informal Training** One internal source of training is **informal training**, which occurs through interactions and feedback among employees. Much of what employees know about their jobs they learn informally from asking questions and getting advice from other employees and their supervisors, rather than from formal training programs.

Informal learning tends to occur as a result of a learning need in the context of working.<sup>41</sup> It may involve group problem solving, job shadowing, coaching, or mentoring; or it may evolve from employees seeking out other people who have the needed knowledge. Although “informal training” may seem to be a misnomer, a great deal of learning occurs informally in work organizations, and some of it happens by design.

**On-the-Job Training** The most common type of training at all levels in an organization is *on-the-job training (OJT)* because it is flexible and relevant to what employees do.<sup>42</sup> Well-planned and well-executed OJT can be very effective.<sup>43</sup> Based on a guided form of training known as job instruction training (JIT), OJT is most effective if a logical progression of stages is used, as shown in Figure 8-8. In contrast with informal training, which often occurs spontaneously, OJT should be planned. The supervisor or manager conducting the training must be able to both teach and show the employees what to do.

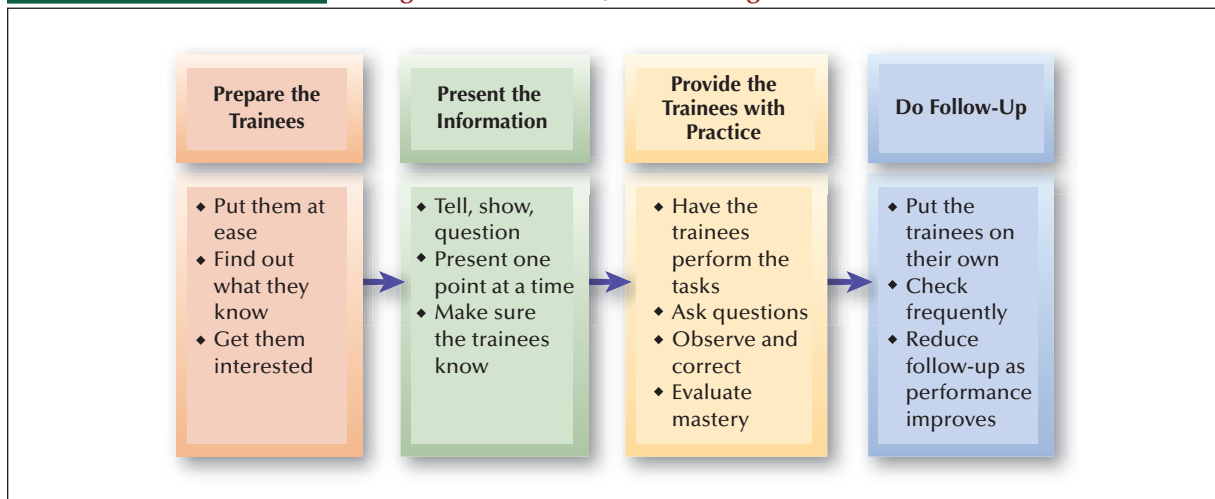
However, OJT has some problems. Often, those doing the training may have no experience in training, no time to do it, or no desire to participate in it. Under such conditions, learners essentially are on their own, and training likely will not be effective. Another problem is that OJT can disrupt regular work. Unfortunately, OJT can amount to no training at all in some circumstances, especially if the trainers simply abandon the trainees to learn the job alone. Also, bad habits or incorrect information from the supervisor or manager can be transferred to the trainees.

### Informal training

Training that occurs through interactions and feedback among employees.

**FIGURE 8-8**

### Stages for On-the-Job Training



## Cross Training “Universal Agents”



As technology has matured in the banking business, ATMs, debit cards, online banking, and direct deposit have changed the job of the bank teller and reduced the need for teller-processed transactions. Cross training can combine the duties of a teller with the duties of a member service representative (MSR), which helps by retaining jobs, making the jobs more interesting and varied, and saving the bank costs.

A “universal agent” is an employee who is cross-trained as both a teller and an MSR. This employee can cover employee absences and lunch breaks for either tellers or MSRs. The universal agent can be scheduled for either position during periods of peak activity, such as Friday afternoons. But to make these advantages become possible, the bank or credit union must provide support with cross training and technology that allows the employee to shift from one job to the other.

The universal agent should be able to serve as a transaction processor, financial counselor, and service provider. Universal agents can approach customers and get them to the proper place/person or handle their needs themselves. If customers need checks cashed, the agent can take them to the teller station. If customers need CDs renewed, the agent can do that at a work station. If

customers need loans, the agent can begin the process and call the loan manager for consultation if necessary.

Two technological changes are necessary to make this work. First, the traditional teller’s position has to be redesigned to allow the agent to move between the teller’s work station and the sales and service work station. Employees circulate through the bank, and every customer receives a sit-down interaction with an agent for all activities.

The second technological change necessary to make the universal agent position work is acquisition of a machine called a “cash recycler.” This machine accepts, stores, and dispenses currency and coins similar to an ATM. It allows the universal agent to get away from the traditional teller’s cash drawer, which must be closed, reconciled, and locked anytime it is left.

Teller and MSR skill sets differ, and cross training is critical to teach someone in one position the duties of an employee in the other. Tellers may need sales training to be able to do the MSR job, and MSRs will need teller training. However, when properly done, the universal agent approach can provide a better sales and service experience for the customer and keep transaction costs to a minimum.<sup>47</sup>

**Cross Training** Cross training occurs when people are trained to do more than one job—theirs and someone else’s.<sup>44</sup> For the employer, the advantages of cross training are flexibility and development.<sup>45</sup> However, although cross training is attractive to the employer, it is not always appreciated by employees, who often feel that it requires them to do more work for the same pay. To counteract such responses and to make it more appealing to employees, learning “bonuses” can be awarded for successfully completing cross training.

In some organizations, the culture may be such that people seek cross-training assignments to grow or prepare for a promotion, but that is not the case in all organizations.<sup>46</sup> Unions typically are not in favor of cross training because it threatens job jurisdiction and broadens jobs. Cross training may require scheduling work differently during training, and temporarily decreased productivity may result from it as people learn. Overall, an effective cross-training program can overcome the concerns mentioned and has the potential to be good for both employer and employee, as the HR Perspective: Cross Training Universal Agents illustrates.

**Cross training** Training people to do more than one job.

## External Training

External training, or training that takes place outside the employing organization, is used extensively by organizations of all sizes. Large organizations use external training if they lack the capability to train people internally or when many people need to be trained quickly. External training may be the best option for training in smaller firms due to limitations in the size of their training staffs and in the number of employees who need various types of specialized training. Whatever the size of the organization, external training occurs for several reasons:

- It may be less expensive for an employer to have an outside trainer conduct training in areas where internal training resources are limited.
- The organization may have insufficient time to develop internal training materials.
- The HR staff may not have the necessary level of expertise for the subject matter in which training is needed.
- There are advantages to having employees interact with managers and peers in other companies in training programs held externally.

**Outsourcing of Training** Many employers of all sizes outsource training to external training firms, consultants, and other entities. Perhaps one-third of training expenditures go to outside training sources. The reasons more outside training is not used may be cost concerns, and a greater emphasis on internal linking of training to organizational strategies. However, outsourcing of training is used more frequently when mergers and acquisition occur.<sup>48</sup>

A popular route for some employers is to use vendors and suppliers to train employees. Several computer software vendors offer employees technical certifications on their software. For example, being a Microsoft Certified Product Specialist gives employees credentials that show their level of technical expertise. Such certifications provide employees with items to put on their résumés should they decide to change jobs. These certifications also benefit employers, who can use them as job specifications for hiring and promotion.

Many suppliers host users' conferences, where employees from a number of firms receive detailed training on using products, services, and features that are new to the employees. Some vendors will conduct the training inside an organization as well if sufficient numbers of employees are to be trained.

**Government-Supported Job Training** Federal, state, and local governments provide a wide range of external training assistance and funding. The Workforce Investment Act (WIA) provides states with block grant programs that target adult education, disadvantaged youth, and family literacy. Employers hiring and training individuals who meet the WIA criteria receive tax credits and other assistance for 6 months or more, depending on the program regulations.

At state and local levels, employers that add to their workforces can take advantage of a number of programs that provide funding assistance to offset training costs. As an example, a number of states offer workforce training assistance for employers. Quick Start (Georgia), Smart Jobs (Texas), and Partnership (Alabama) are three well-known training support efforts. Often such programs are linked to two-year and four-year colleges throughout the state.

**Educational Assistance Programs** Some employers pay for additional education for their employees. Typically, the employee pays for a course that

applies to a college degree and is reimbursed upon successful completion of the course. The amounts paid by the employer are considered nontaxable income for the employee up to amounts set by federal laws.

Lifelong Learning Accounts (LiLA) programs can be offered by employers. These accounts are like 401(K) plans—employers and employees contribute to a fund for adult education. The employee owns the plan and keeps it even if the employee leaves the company. It can be used to further one's education, perhaps in order to move to a different job in the company.<sup>49</sup>

One concern about traditional forms of employee educational programs is that they may pose risks for the employer. Upon completion of the degree, the employee may choose to take the new skills and go elsewhere. Employers must plan to use these skills upon employee graduation to improve the retention of those employees.



#### LOGGING ON

##### Quick Start Technical College System of Georgia

The Quick Start system provides information on delivering workforce training in a broad range of industry sectors. Visit the website at [www.georgiaquickstart.org](http://www.georgiaquickstart.org).

## Combination Training Approaches

Whether training is delivered internally or externally, appropriate training must be chosen. The following overview identifies two common training approaches that often integrate internal and external means. Some are used more for job-based training, while others are used more for development.

**Cooperative Training** Cooperative training approaches mix classroom training and on-the-job experiences. This training can take several forms. One form, generally referred to as *school-to-work transition*, helps individuals move into jobs while still in school or on completion of formal schooling. Such efforts may be arranged with high schools or community colleges.

Another form of cooperative training used by employers, trade unions, and government agencies is *apprentice training*. An apprenticeship program provides an employee with on-the-job experience under the guidance of a skilled and certified worker. Certain requirements for training, equipment, time length, and proficiency levels may be monitored by a unit of the U.S. Department of Labor. Figure 8-9 indicates the most common areas that use apprenticeships to train people for jobs. Apprenticeships usually last 2 to 5 years, depending on the occupation. During this time, the apprentice usually receives lower wages than the certified individual.

A form of cooperative training called *internship* usually combines job training with classroom instruction from schools, colleges, and universities.<sup>50</sup> Internships benefit both employers and interns. Interns get real-world exposure, a line on their résumés, and a chance to closely examine a possible

FIGURE 8-9

### Most Common Apprenticeship Occupations

- ◆ Electrician (construction)
- ◆ Carpenter
- ◆ Plumber
- ◆ Pipe fitter
- ◆ Sheet metal worker

- ◆ Structural-steel worker
- ◆ Elevator constructor
- ◆ Roofer
- ◆ Sprinkler fitter
- ◆ Bricklayer

employer. Employers get a cost-effective source of labor and a chance to see an intern at work before making a final hiring decision.<sup>51</sup>

## E-Learning: Online Training

E-learning is use of the Internet or an organizational intranet to conduct training online. E-learning is popular with employers. The major advantages are cost savings and access to more employees. Estimates are that corporate training conducted through learning technology will increase in the next few years.<sup>52</sup> Almost 30% of learning hours today are totally technology based, according to an ASTD report, and e-learning is preferred by workers under the age of 30.<sup>53</sup>

However, e-learning is advancing gradually, not explosively. It has found favor as part of a “blended” solution that combines it with other forms of learning. By itself, e-learning is not rated among the top effective training practices by training professionals.<sup>54</sup> Changes in technology appear to make possible in the future some things that were not possible in the first years of e-learning. For example, Web 2.0 tools such as instant messaging and Web conferencing may allow trainers to expand to “soft skills” electronic training,<sup>55</sup>

and the ability to have reasonably priced video conferencing may make training via this medium more acceptable.<sup>56</sup>

The method is certainly fast and flexible. For example, after Hurricane Katrina, a Red Cross volunteer was able to design and make an online course to train volunteers available in 4 days. When volunteers signed up to help, they were immediately directed to the online training course.<sup>57</sup> Three areas where online learning has proved to be beneficial are distance training/learning, simulations, and blended learning.



### LOGGING ON

#### E Learning Guild

This website provides members with learning opportunities, networking services, resources, and publications on e-learning. Visit the site at [www.elearningguild.com](http://www.elearningguild.com).

**Distance Training/Learning** Many college and university classes use some form of Internet-based course support. Blackboard and WebCT are two popular support packages that thousands of college professors use to make their lecture content available to students. These packages enable virtual chat and electronic file exchange among course participants, and also enhance instructor-student contact.

Many large employers use interactive two-way television to present classes. The medium allows an instructor in one place to see and respond to a “class” in any number of other locations. With a fully configured system, employees can take courses from anywhere in the world.<sup>58</sup>

**Simulations and Training** Computer-based training involves a wide array of multimedia technologies—including sound, motion (video and animation), graphics, and hypertext—to tap multiple learner senses. Computer-supported simulations within e-learning can replicate the psychological and behavioral requirements of a task, often in addition to providing some amount of physical resemblance to the trainee’s work environment.

From highly complicated systems that replicate difficult landing scenarios for pilots to programs that help medical trainees learn to sew sutures, simulations allow for safe training when the risks associated with failure are high. For example, sanitation workers can get practice driving on slick roads and down tight alleys without damaging anything. A \$450,000 computer simulation uses videos, movement, and sound to simulate driving a dump truck. Accidents from poor truck handling skills include damage to fences, posts, and buildings. The safety training simulation reduces such accidents.<sup>59</sup>

## Simulations and Games



A young woman walks into a restaurant in a busy city, sets down a purse, and leaves. Moments later a bomb explodes, and people are screaming and injured as the restaurant goes up in flames. Fire trucks and police go to work to deal with the mess. This did not really happen; it is a training simulation made to teach emergency response initiatives. Such real-time virtual training forces employees to apply their knowledge in the real world, and to make quick decisions in difficult situations.

Many people play computer games for fun, but games in various forms also are becoming a very useful part of training. For years military and government workers have used games and simulations to prepare for combat, improve the use of military equipment, and prepare for natural and human-caused disasters. Now many private employers of all types are using gaming situations for both new and existing employees.

For example, a company in Pittsburg uses a virtual training environment in which employees learn to operate a forklift to move loads from the loading area

to another area. They must check their equipment before starting, and a wrong move may result in a forklift crashing into another employee or driving off the dock. The simulation allows learning without tying up the dock for training or hurting anyone.

Railroads, trucking companies, banks, retailers, technology firms, hotels, and many others are using gaming simulations. Doing so appears to increase employee interest in training, promises better training transfer, and improves performance. A younger workforce seems to appreciate the training method. Game-based learning (GBL) can present realistic, complete, and captivating experiences for employees. For many, “winning the game” is more motivating than answering questions or taking a test.

However, GBL requires the same needs analysis and planning as any other training effort. While the games may be more interesting than some classes, they do not automatically provide good training. The right game must be used to teach the right things.<sup>60</sup>

Virtual reality is also used to create an artificial environment for trainees so that they can participate in the training. Gaming is a growing e-learning tool, as the HR Perspective describes.

The new technologies incorporated into training delivery affect the design, administration, and support of training. Some companies have invested in electronic registration and recordkeeping systems that allow trainers to register participants, record exam results, and monitor learning progress.

Generally, technology is moving from center stage to becoming embedded in the learning and training processes. As learning and work merge even closer in the future, technology is likely to integrate seamlessly into the work environment of more employees. This integration will allow employees to spend less time in the future learning how to use technology, and more time on learning the desired content. For example, screening passenger bags in airports has been improved by using a simulation tied to the X-ray machine that is used to screen.<sup>61</sup>

**Blended learning** Learning approach that combines methods, such as short, fast-paced, interactive computer-based lessons and teleconferencing with traditional classroom instruction and simulation.

**Blended Learning** E-learning cannot be the sole method of training, according to the findings of a number of employers.<sup>62</sup> Therefore, the solution seems to be **blended learning**, which might combine short, fast-paced, interactive computer-based lessons and teleconferencing with traditional classroom instruction and simulation.<sup>63</sup> Deciding which training is best handled by which medium is important. A blended learning approach can use e-learning for building knowledge of certain basics, a Web-based virtual classroom for building skills, and significant



FIGURE 8-10

## Advantages and Disadvantages of E-Learning

Advantages	Disadvantages
<ul style="list-style-type: none"> <li>◆ Is self-paced; trainees can proceed on their own time</li> <li>◆ Is interactive, tapping multiple trainee senses</li> <li>◆ Enables scoring of exercises/assessments and the appropriate feedback</li> <li>◆ Incorporates built-in guidance and help for trainees to use when needed</li> <li>◆ Allows trainers to update content relatively easily</li> <li>◆ Can enhance instructor-led training</li> <li>◆ Is good for presenting simple facts and concepts</li> <li>◆ Can be paired with simulation</li> </ul>	<ul style="list-style-type: none"> <li>◆ May cause trainee anxiety</li> <li>◆ Some trainees may not be interested in how it is used</li> <li>◆ Requires easy and uninterrupted access to computers</li> <li>◆ Is not appropriate for some training (leadership, cultural change, etc.)</li> <li>◆ Requires significant upfront investment both in time and costs</li> <li>◆ Requires significant support from top management to be successful</li> <li>◆ Some choose not to do it even if it is available</li> </ul>

in-person traditional instructor-led training sessions and courses. Use of blended learning provides greater flexibility in the use of multiple training means and enhances the appeal of training activities to different types of employees.<sup>64</sup>

**Advantages and Disadvantages of E-Learning** The rapid growth of e-learning makes the Internet or an intranet a viable means for delivering training content. But e-learning has both advantages and disadvantages that must be considered.<sup>65</sup> In addition to being concerned about employee access to e-learning and desire to use it, some employers worry that trainees will use e-learning to complete courses quickly but will not retain and use much of what they learned. Taking existing training materials, putting them on the Internet, and cutting the training budget is not the way to succeed with e-learning. An important question to ask is: Can this material be learned as well online as through conventional methods? In some cases, the answer is no.

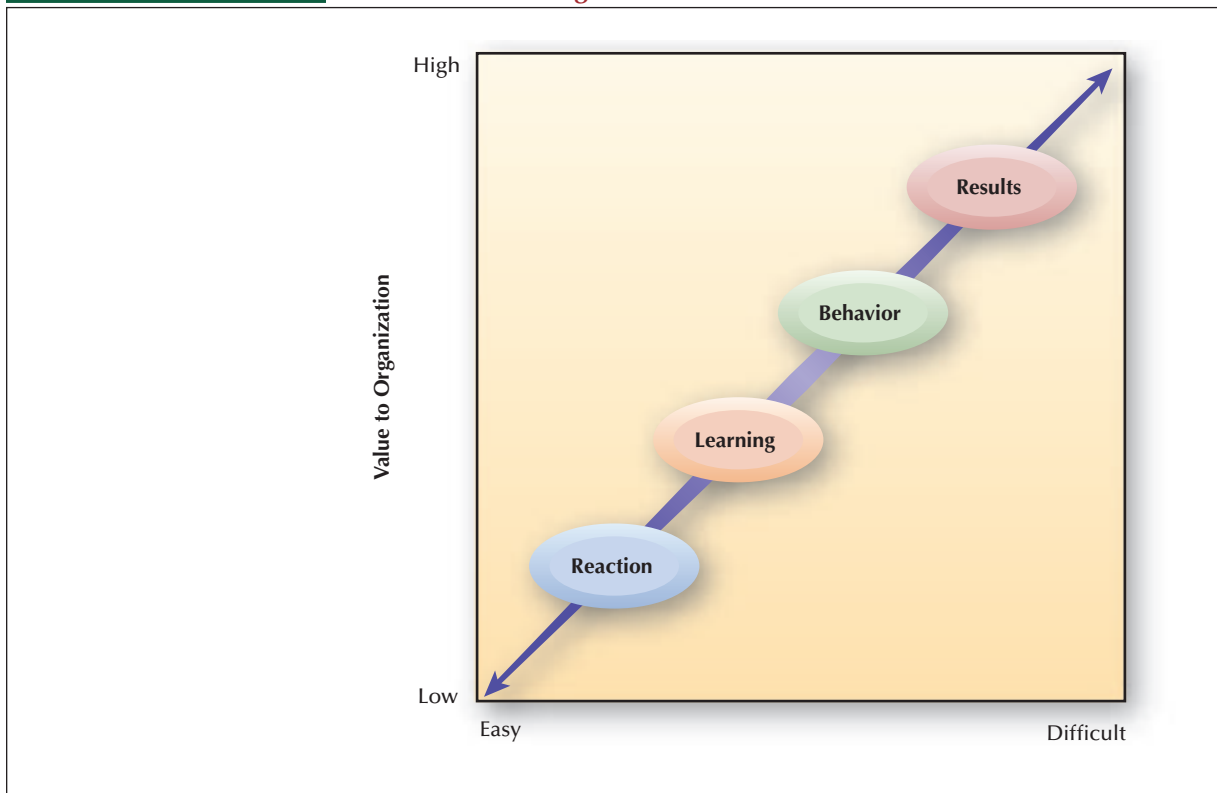
E-learning is the latest development in training delivery. Some of the biggest obstacles to using it will be keeping up with the rapid changes in technological innovation and designing e-courses appropriately. E-learning has had a major impact on HR and training, but there are no “ten easy steps” to making e-learning successful. Figure 8-10 presents a listing of the most commonly cited advantages and disadvantages of e-learning.

## TRAINING EVALUATION

Evaluation of training compares the post-training results to the pre-training objectives of managers, trainers, and trainees. Too often, training is conducted with little thought of measuring and evaluating it later to see how well it worked. Because training is both time consuming and costly, it should be evaluated.<sup>66</sup>

FIGURE 8-11

## Levels of Training Evaluation



## Levels of Evaluation

It is best to consider how training is to be evaluated before it begins. Donald L. Kirkpatrick identified four levels at which training can be evaluated. As Figure 8-11 shows, the evaluation of training becomes successively more difficult to do as it moves from measuring reaction to measuring learning to measuring behavior and then to measuring results. But the training that affects behavior and results versus reaction and learning provides greater value in viewing training as a strategic performance contributor.<sup>67</sup>

**Reaction** Organizations evaluate the reaction levels of trainees by conducting interviews with or administering questionnaires to the trainees. Assume that 30 managers attend a two-day workshop on effective interviewing skills. A reaction-level measure could be gathered by having the managers complete a survey that asked them to rate the value of the training, the style of the instructors, and the usefulness of the training to them.

**Learning** Learning levels can be evaluated by measuring how well trainees have learned facts, ideas, concepts, theories, and attitudes. Tests on the training material are commonly used for evaluating learning, and they can be given both before and after training to provide scores that can be compared. If test scores indicate learning problems, then instructors get feedback and courses can be redesigned so that the content can be delivered more effectively. Of course, learning enough to pass a test does not guarantee that trainees will remember the training content months later or that it will change job behaviors.<sup>68</sup>

**Behavior** Evaluating training at the behavioral level means measuring the effect of training on job performance through observing job performance. For instance, the managers who participated in an interviewing workshop might be observed conducting actual interviews of applicants for jobs in their departments. If the managers asked questions as they had been trained to and used appropriate follow-up questions, then behavioral indicators of the effectiveness of the interviewing training exist.

**Results** Employers evaluate results by measuring the effect of training on the achievement of organizational objectives. Because results such as productivity, turnover, quality, time, sales, and costs are relatively concrete, this type of evaluation can be done by comparing records before and after training. For the managers who attended interviewing training, evaluators could gather records of the number of individuals hired compared with the number of employment offers made before and after the training.

The difficulty with measuring results is pinpointing whether changes were actually the result of training or of other major factors. For example, the managers who completed the interviewing training program can be measured on employee turnover before and after the training, but turnover also depends on the current economic situation, the demand for workers, and many other variables.



## Training Evaluation Metrics

Training is expensive, and it is an HR function that requires measurement and monitoring. Cost-benefit analysis and return-on-investment (ROI) analysis are commonly used to measure training results, as are various benchmarking approaches.

**Cost-Benefit Analysis** Training results can be examined through **cost-benefit analysis**, which is comparison of costs and benefits associated with training. There are four stages in calculating training costs and benefits:<sup>69</sup>

1. *Determine training costs.* Consider direct costs such as design, trainer fees, materials, facilities, and other administration activities.
2. *Identify potential savings results.* Consider employee retention, better customer service, fewer work errors, quicker equipment production, and other productivity factors.
3. *Compute potential savings.* Gather data on the performance results and assign dollar costs to each of them.
4. *Conduct costs and savings benefits comparisons.* Evaluate the costs per participant, the savings per participant, and how the costs and benefits relate to business performance numbers.

One firm uses HR metrics for many aspects of evaluating how general managers and their stores are performing. Scoring results are produced annually, quarterly, and monthly.

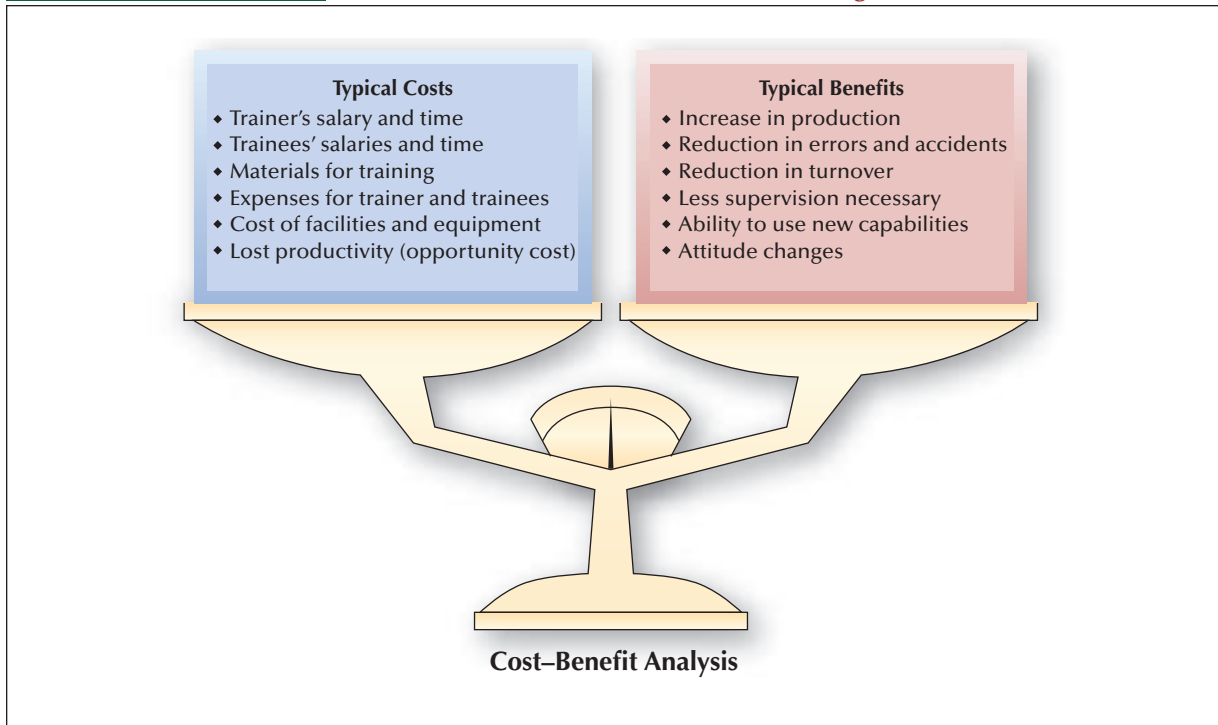
Figure 8-12 shows some costs and benefits that may result from training. Even though some benefits (such as attitude changes) are hard to quantify, comparison of costs and benefits associated with training remains a way to determine whether training is cost-effective. For example, one firm evaluated a traditional safety training program and found that the program did not lead to a reduction in accidents. Therefore, the safety training was redesigned, and better safety practices resulted.

### Cost-benefit analysis

Comparison of costs and benefits associated with training.

FIGURE 8-12

## Possible Costs and Benefits in Training



**Return-on-Investment Analysis and Benchmarking** In organizations, training is often expected to produce an ROI. Still, too often, training is justified because someone liked it, rather than on the basis of resource accountability. ROI simply divides the return produced because of the training by the cost (or investment) of the training.

In addition to evaluating training internally, some organizations use benchmark measures to compare it with training done in other organizations. To do benchmarking, HR professionals gather data on training in their organization and compare them with data on training at other organizations in the same industry and in companies of a similar size. Comparison data are available through the American Society for Training and Development and its Benchmarking Service. This service has training-related data from more than 1,000 participating employers who complete detailed questionnaires annually. Training also can be benchmarked against data from the American Productivity & Quality Center and the Saratoga Institute.

## Training Evaluation Designs

With or without benchmarking data, internal evaluations of training programs can be designed in a number of ways. The rigor of the three designs discussed next increases with each level.

**Post-Measure** The most obvious way to evaluate training effectiveness is to determine after the training whether the individuals can perform the way management wants them to perform. Assume that a customer service manager has 20 representatives who need to improve their data-entry speeds. After a one-day training session, they take a test to measure their speeds. If the

representatives can all type the required speed after training, was the training beneficial? It is difficult to say; perhaps most of them could have done as well before training. Tests after training do not always clearly indicate whether a performance is a result of the training or could have been achieved without the training.

**Pre-/Post-Measure** By differently designing the evaluation just discussed, the issue of pretest skill levels can be considered. If the data-entry speed is measured before and after training, then it will indicate whether the training made any difference. However, a question would remain: Was any increase in speed a response to the training, or did these employees simply work faster because they knew they were being tested? People often perform better when they know their efforts are being evaluated.

**Pre-/Post-Measure with a Control Group** Another evaluation design can address the preceding problem. In addition to testing the 20 representatives who will be trained, the manager can test another group of representatives who will not be trained, to see if they do as well as those who are to be trained. This second group is called a control group. After training, if the trained representatives work significantly faster than those who were not trained, the manager can be reasonably sure that the training was effective.

## S U M M A R Y

- Training is the process that provides people with the capabilities they need to do their jobs.
- Four types of training are regular/required, job/technical, interpersonal/problem solving, and developmental/career in nature.
- A strategic approach to training links organizational strategies and HR planning to various training efforts.
- Training affects factors such as organizational competitiveness, knowledge management, revenue, and performance.
- Performance consulting compares desired and actual results in order to identify needed training and nontraining actions.
- Global strategies must consider training as a key component, including intercultural competence training to prepare employees to respond more appropriately to situations encountered during global assignments.
- The training process consists of four phases: assessment, design, delivery, and evaluation.
- Training needs can be assessed using organizational, job/task, and individual analyses, and then training objectives can be set to help the organization meet those needs.
- Training design must consider learner readiness, learning styles, and learning transfer.
- Training can be delivered internally (e.g., OJT training) or through external means, and formally (e.g., through classes) or informally.
- Common training approaches include cooperative training and classroom/conference training.
- Orientation is a form of onboarding designed to help new employees learn about their jobs.
- E-learning is training conducted using the Internet or an intranet, and both its advantages and its disadvantages must be considered in its development.
- Various organizations are taking advantage of training that uses technology, such as Web-based multimedia, video streaming, simulation, and virtual reality.
- Training can be evaluated at four levels: reaction, learning, behavior, and results.
- Training evaluation metrics may include cost-benefit analysis, ROI analysis, and benchmarking.
- A pre-/post-measure with a control group is the most rigorous design for training evaluation; other, less rigorous designs can be used as well.

## CRITICAL THINKING ACTIVITIES

1. Identify training needs for a group of new salespeople in a high-end jewelry store.
2. Why is evaluating training an important part of strategic training?
3. Develop an orientation checklist based on one first-day session and a second session of 4 hours each to cover 30-days later.
4. Make a briefing for division managers showing the advantages and disadvantages of e-learning and how to “blend” it with other teaching techniques. Use websites, including [www.ASTD.org](http://www.ASTD.org).

## HR EXPERIENTIAL PROBLEM SOLVING

Due to rapid growth of your technology company, the executive team has asked HR to develop an internal training program. The purpose of the program is to help employees recently promoted to supervisory positions develop the leadership skill sets they need to be successful as supervisors. This will be the first formal training program for your small company. As part of the process, you want to consider the learning styles of the new supervisors. To assist you in developing a successful,

results-oriented program, review various training websites, including [www.agelesslearner.com](http://www.agelesslearner.com).

1. To meet the needs of the varied learning styles and maximize the learning potential of the participants, what training techniques should be implemented?
2. Identify the content topics that you will recommend be included in the program to ensure the development of successful leaders.

## CASE

### 21st-Century Onboarding

New employees at Sun Microsystems begin their orientation sessions after being hired with a computer game. It is part of an attempt to integrate new people, improve the image of the company, get feedback, and start training. Looking over the shoulder of a new employee, one would see the person playing a computer game called “Dawn of the Shadow Spectors,” battling evil forces that are trying to destroy Sun’s network.

Before Sun changed its orientation program, an employee’s first day at work consisted mostly of filling out paperwork, as in most companies. Some new employees waited 2 weeks to get e-mail, and people who worked remotely sometimes waited weeks or months before meeting their managers.

The chief learning officer at Sun said, “We wanted to make a better first impression,” unlike that made on an employee’s first day if the company/manager is not ready and the person just sits there. That can make a bad impression that is lasting. Now at Sun the onboarding starts as soon as a person accepts a job. The new employee logs

on to the company’s new hire website and learns about the company by playing video games. The person sees a welcome video from the CEO and connects with other employees via social networks. New employees also fill out their W-4s, I-9s, and other paperwork on the website. Sun, which has about 34,000 employees, believes orientation should start the moment a person is hired and continue until the person is productive.

A Houston-based company, El Paso Corporation, which employs about 5,000, has a different onboarding process. New hires attend a first-day orientation and then another a month later. During their first week at the company, they get an e-mail with links to everything from ordering business cards to joining the credit union. Before the new system was instituted, employees sometimes waited to even get a computer. One company official noted that new employees “were here but just sitting around because they didn’t have the tools to work.” Now they have a workspace, computer, and network access on their first day.



An advertising agency in Fort Lauderdale, Florida, takes yet a different approach. Zimmerman Advertising, which has about 1,000 employees, wants employees to understand the company, so new hires log on and learn from the new hire website what the company does, its client philosophy, and about its leadership. Then they meet for an hour with the CEO who talks about how he built the company. New hires get a 30-, 60-, and 90-day training checklist that must be completed on time and signed by their supervisor. They also have an opportunity to provide feedback via the website. Modern onboarding systems help new

employees understand what the company is all about so they are prepared to integrate into it, says Zimmerman's Vice President of HR.<sup>70</sup>

### QUESTIONS

1. The case introduces three companies of very different sizes with three different onboarding approaches. What differences do you see in their approaches? What similarities?
2. Are there important ideas missing from all three approaches? If so, what are they?
3. Which approach sounds best to you? Why?

## S U P P L E M E N T A L C A S E S

### Training Crucial for Hotels

This case illustrates the increased role training is playing in large U.S. hotel chains. (For the case, go to [www.cengage.com/management/mathis](http://www.cengage.com/management/mathis).)

### New Payroll Clerk

This case shows the frustration that often accompanies the first day at work, and why orientation is important in reducing turnover. (For the case, go to [www.cengage.com/management/mathis](http://www.cengage.com/management/mathis).)

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