



Topic 3: Training and Development Techniques

3.3.1 Training and Development Techniques ✓

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3.3.4 Off-the-job Training Methods

3.3.5 On-the-job Versus Off-the-job Training ✓

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Developing Training Objectives

The first step in designing a training program is to translate the training needs into **behavioral objectives**. When the training needs are assessed, the trainer should try to present the results in behavioral terms. A good needs analysis that identifies clear behavioral objectives contributes to the development of quality training activities and facilitates the evaluation process.

The following list is an illustration of POOR behavioral objectives.

As a result of completing this seminar managers will increase their effectiveness in learning how to

1. think like a manager in balancing personal and company goals
2. sharpen their oral and written communication skills
3. learn the art of making sound decisions
4. discover proven methods for planning and organizing

The problem with these objectives is that they fail to specify the terminal behaviors trainees should display after training. They describe topics and concepts rather than behaviors. For example, rather than indicating that the supervisors will become "sensitive to the feelings of others," a behavioral objective would state "In reprimanding employees, supervisors will direct their remarks to the employees' behaviors rather than criticize the employees personally." Being sensitive to others is a personality trait, not a behavioral objective.

Good behavioral objectives possess three basic attributes:

1. The objective is described in specific behavioral terms, using an active verb such as *to make*, *to construct*, *to adjust*, *to describe*, or *to list*. For example, there is an important difference between saying that a trainee will *know* how to manage time and saying that the trainee will *make a list* of things that need to be done, *assign a priority* to each item, *make an agenda* for committee meetings, and *schedule quiet time* to study important issues.
2. A good behavioral objective specifies the standard of performance, which should be expressed in terms of number, degree, and accuracy.
3. A good behavioral objective specifies the relevant constraints and time limitations for performing the behavior. For example, the trainee will be able to enter numeric data on a computer keyboard at the rate of 200 strokes per minute, with less than one percent errors for a period of 12 minutes.

A useful mnemonic for writing good behavioral objectives is SMART: specific, measurable, action-oriented, realistic, and timely, as shown in [Table 3-1](#).

Table 3-1

Guidelines for Writing Behavioral Objectives

S *Specific*—Objectives should specify exactly what the learner will accomplish as a result of the training.

M *Measurable*—Objectives should indicate measurable standards by which results can be evaluated.

A *Action-oriented*—Objectives should specify exactly what the learner will be able to do after the training.

R *Realistic*—Objectives should be attainable within the timeframe of the training.

T *Timely*—Objectives should have immediate application to the work setting.

The following list of objectives for a supervisory safety training program is an example of GOOD behavioral objectives.

After completing the safety training, supervisors should be able to do the following without referring to the safety manual:

1. List, within five minutes, all of the hazardous materials that are present in the workplace.
2. Identify, within five minutes, the maximum exposure limits to all of the hazardous materials in their department and at least 80 percent of the materials outside their department.
3. Teach subordinates how to use all materials safely so they do not exceed the maximum exposure limits.
4. Explain the physiological effects of the hazardous materials they and their subordinates handle, using proper medical terminology.
5. Identify, in both their early and mature stages, the symptoms that result from excessive exposure to these hazardous materials.



3.3.2 Training Methods and Processes

The appropriate training method depends on what is being taught. The methods and processes for teaching motor skills are much different than those for teaching ideas and values.

Motor Responses

To help a learner develop appropriate motor responses, the trainer should follow this pattern:

1. Familiarize the trainee with the equipment, materials, and surroundings.
2. Demonstrate the activity.
3. Let the trainee begin practicing the activity.
4. Provide adequate guidance and feedback to make sure that incorrect responses are eliminated and correct responses are acquired. Verbal instructions may help to explain what the learner is doing wrong and what he or she needs to do differently, but physical demonstrations, showing exactly what needs to be done, are much more helpful.¹

Learning theorists describe skill acquisition as a three-phase process:

1. *declarative knowledge*
2. *knowledge compilation*
3. *procedural knowledge*

In the first phase, **declarative knowledge**, the trainee acquires a basic understanding of what is required to perform the task. This phase typically includes a lecture on the general principles of the task and a demonstration of how to perform the task. During the **knowledge compilation** phase, the trainees integrate the sequence of activities required to perform the task and develop a cognitive understanding of the process. Performance improves as the trainees practice the skill and discover various methods of simplifying or reducing each task component. In the third phase of skill acquisition, **procedural knowledge** occurs when the learner has **overlearned** the skill and performance becomes rapid and accurate and can be performed with minimum attention to the task.²

Rote Learning

The following procedures help learners acquire rote learning:

1. Briefly familiarize the learners with the material to be learned.
2. Identify any patterns of association that may help the learners remember the material, such as recurring themes or repeating patterns within the material.
3. Provide opportunities for the learners to practice repeating the new material. Practice should include both silent study and oral repetition. Distributed practice over a long period of time is generally superior to massed practice.
4. Provide accurate and immediate feedback so that the learners' errors can be corrected as soon as they are made.
5. Require repetitive practice so that **overlearning** occurs and trainees are given opportunities to demonstrate their learning.³

Idea Learning

The procedures recommended for learning ideas depend on whether the training follows operant conditioning theory or social cognitive theory. Operant conditioning theory advocates the following procedures:

1. Ideas must be divided into a sequential pattern of concepts and subconcepts.
2. Learners should be allowed to master one concept before proceeding to the next.
3. Learners should be required to practice each response and to demonstrate mastery of each concept.
4. Reinforcement should be provided to reward each step in the learning process.
5. Learners should be required to review the material frequently to avoid forgetting. Forgetting new ideas is less likely to occur if each idea is used as a building block for further learning.⁴

According to social cognitive theory, the process of learning ideas is grounded in symbolic learning. Here, learning is a process of discovery, and trainees should actively participate in the learning process. The trainees should be allowed to explore situations so that they may eventually discover for themselves the operating principles or relationships involved. Sometimes this discovery process involves a sudden flash of insight and understanding. At other times it involves the gradual discovery of common elements, common principles, or sequential trends. The trainer can frequently assist the trainee not so much by instructing or presenting information as by asking questions and attempting to focus the trainees' thinking and discovery processes in a particular direction.

The early stages of most training involve rote learning while the trainees acquire the relevant facts and principles. Gradually, however, the students become involved in creating or actively reinterpreting knowledge and its applications. Skilled instructors can facilitate the process of idea learning by using a broad range of questions, beginning with simple factual inquiries and advancing to more complex interpretive questions.⁵

The learning of new ideas is both fun and frustrating. A sudden insight that solves a complex problem that an individual has been wrestling with for a long time can create an exhilarating feeling of joy and satisfaction. On the other hand, learning is frequently very frustrating and can cause a great deal of anguish as learners try to discover new relationships or solve new problems.

Value Internalization

According to research on moral development, the most important techniques for developing value internalization are induction and modeling.⁶

Induction refers to all forms of verbal explanation, such as reasoning, preaching, and teaching. Induction provides cognitive information describing appropriate behaviors and a justification for why such behaviors are important. It also includes various verbal reinforcements for appropriate behaviors, such as "thank you for reporting it," "you're an honest person," and "I appreciate your honesty." Abundant evidence indicates that induction is a useful, if not necessary, technique in moral development. Parents who use induction to explain the implications of their child's behavior on others generally have children who demonstrate consideration for others, resistance to temptation, and little aggression. Likewise, supervisors who provide logical explanations for why employees should behave honestly, why they should be helpful to others, and why they should be loyal to the company will help employees to acquire moral values of honesty, pride in work, and loyalty.

Modeling refers to the example that individuals observe in others' behavior. For instance, if a supervisor takes pride in his or her work and tries to hold down unnecessary costs, this behavior will set a good example for subordinates, who will be inclined to model their supervisor's behavior. Modeling serves to inform individuals about what they should do and indicates what is considered appropriate by others. The example of a model creates a general expectation for others to follow.

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3.3.3 On-the-job Training Methods

Training and development techniques can be conveniently categorized as on-the-job or off-the-job techniques.¹ Some training techniques, such as classroom instruction, are fairly standard and typical; others, such as taking a group of executives on a wilderness survival adventure, are unusual and novel.² On-the-job techniques are used more frequently than off-the-job techniques,³ probably because they focus on increasing immediate productivity. Off-the-job techniques tend to focus more on long-term development and education rather than on short-term training for production.

Job-Instruction Training

Job-instruction training (JIT) has been the most popular method of training for most blue-collar and some white-collar employees since it was first described by the War Manpower Board during World War II. Before the actual learning occurs, job-instruction training requires a careful analysis of the job to be performed, an assessment of what the trainee knows about the job, and a training schedule. Job-instruction training begins with an introductory explanation of the purpose of the job and a step-by-step demonstration by the trainer of the job operations. After the trainee has demonstrated the job enough times for the trainee to comprehend the steps, the trainee is given the opportunity to try it alone.

During the demonstration, the trainer describes what is being done and why. The trainees also describe what they are doing while they are practicing. During the early practice sessions, the trainer maintains a close watch on the trainees to provide accurate and immediate feedback on their performances. As practice continues and the trainees reach satisfactory levels of performance, the close supervision is discontinued. However, periodic checks are made to ensure that the performance continues to be satisfactory.

Apprenticeships

Apprenticeship training refers to the process of having a new worker, called an apprentice, work alongside and under the direction of a skilled technician. In many of the skilled trades, such as plumbing, electronics, and carpentry, apprentice training is mandatory for admission into the trade. Currently there are apprenticeships in more than 1,000 occupations, including careers in healthcare, information technology, manufacturing, transportation, and energy. These programs are defined formally by the United States Department of Labor's Office of Apprenticeship and involve a written agreement. Apprenticeship programs range from one to six years, but the majority of programs are four years in length. During the program, the apprentice receives both structured, on-the-job training and job-related education. For each year of the apprenticeship, the apprentice will normally receive 2,000 hours of on-the-job training and a recommended minimum of 144 hours of related classroom instruction.⁴

Companies can sponsor apprenticeship programs, which consist of five core components: direct business involvement, on-the-job training, related instruction, rewards for skill gains, and completion resulting in a national occupation credential. Apprenticeships are regulated at the federal level under the National Apprenticeship Act. The benefits to both the trainee and the company for sponsoring an apprenticeship program include greater training and talent, better retention and loyalty, and less costly training than regular colleges and technical schools.⁵ Apprenticeship programs in the United States need to be registered with and approved by the Department of Labor's Employment and Training Administration. Some states also have boards that monitor apprenticeship programs.

After an apprentice has worked under the direction of a skilled technician for a specified number of years, the apprentice becomes a journeyman. The effectiveness of apprenticeship training largely depends upon the ability of the skilled technician to supervise the learning process. Individual differences in apprentices need to be recognized, and job assignments and instruction periods need to be carefully sequenced to maximize learning.

Internships and Assistantships

Internships and assistantships provide training similar to apprenticeship training; however, assistantships and internships typically refer to occupations that require a higher level of formal education than that required by the skilled trades. Many colleges and universities have developed agreements with local organizations to provide internship opportunities for students. These internships are part of what is called a **cooperative education** project. The students are employed by a business organization and work just the same as other full-time employees. However, they also perform under the direction of a faculty member from the school or college where they are students. Students are frequently expected to write reports describing their experiences and what they have learned, and they typically receive academic credit toward graduation for such experiences.⁶

Often the success of an internship program depends on whether the interns are treated as well as actual employees. When they are given orientation training, are assigned a mentor, and are given meaningful assignments, interns are most likely to have a worthwhile experience and to make valuable contributions to the organization.⁷

Student interns must be paid at least the minimum wage rate unless the internship is structured in a way that qualifies it as an unpaid internship. The Department of Labor has adopted seven non-exhaustive factors to be used when analyzing whether an intern should be classified as an employee:

1. The extent to which the intern and the employer clearly understand that there is no expectation of compensation. Any promise of compensation, express or implied, suggests that the intern is an employee – and vice versa.
2. The extent to which the internship provides training that would be similar to that which would be given in an educational environment, including the clinical and other hands-on training provided by educational institutions.
3. The extent to which the internship is tied to the intern's formal education program by integrated coursework or the receipt of academic credit.
4. The extent to which the internship accommodates the intern's academic commitments by corresponding to the academic calendar.
5. The extent to which the internship's duration is limited to the period in which the internship provides the intern with beneficial learning.
6. The extent to which the intern's work complements, rather than displaces, the work of paid employees while providing significant educational benefits to the intern.
7. The extent to which the intern and the employer understand that the internship is conducted without entitlement to a paid job when the internship concludes.

Courts have used the above factors as a "primary beneficiary test" to determine whether an intern is, in fact, an employee under the FLSA. An unpaid intern should be the primary beneficiary of the relationship, not the organization.

Job Rotation and Cross Training

Job rotation and cross training are learning techniques that are usually reserved for managerial and technical occupations. Cross-training involves giving trainees a series of job assignments in various parts of the organization for a specific period of time, such as a few days or several months. The idea is to expose individuals to a number of organizational challenges by rotating them through various key departments. In each department, trainees take responsibility for specific results. Trainees become personally involved in departmental operations by accepting functional responsibility with ample opportunity to exercise judgment and decision making. This responsibility should be supplemented with supportive coaching from an immediate supervisor in each job assignment.

When two employees in different departments swap or exchange jobs for a defined period, this practice is often called job swapping. Typically, the employees have similar knowledge and skills, which allow them to cover for each other while on the job swap, and they eventually go back to their original positions. Like cross training, job swapping allows employees to gain new perspectives and increase their knowledge of other departments and the challenges they face.

Cross training can also occur in work groups where group members learn to perform all of the jobs in the group. This training often occurs as on-the-job instruction, and employees who are cross trained usually are compensated for their increased skills. The advantage of cross training in work teams is that the teams are generally more productive due to the added flexibility in assigning jobs when someone is absent or leaves.

With job rotation and cross-training, trainees gain an overall perspective of the organization and an understanding of the interrelationships among its various parts. Trainees can also become more clear in their career aspirations and their commitment to the organization. Cross-training is an excellent method for preparing high-potential specialists for future executive responsibilities. It compels people to broaden their perspective by acquainting them with various people, processes, and technologies. Movement from one position to another provides managers with exposure to a number of different job functions and a broad grasp of the overall purpose of an organization. New management trainees may be rotated through different jobs, usually lasting four to six months, to allow them to experience a broad range of functions that occur within an organization.

The disadvantages of job rotation is that a trainee always feels temporary and may not make a personal commitment to become involved in working and accomplishing much. A trainee may find job rotation particularly undesirable if it involves relocation of his or her family. Another disadvantage is that there is usually a

3.3.4 Off-the-job Training Methods

Independent Study

The most important form of training and development consists of independent learning by people trying to train themselves. Learning is an individual responsibility and training works best when employees are internally motivated to learn. Employees are increasingly relying on informal learning methods to train themselves in what they need to know. These informal methods provide immediate answers to questions and include such tactics as asking colleagues at work, posting inquiries on a blog, or searching the internet. One survey estimates that 70 percent of employee learning happens informally on the job.¹

The most frequent kinds of formal self-study activities are reading books and professional magazines, taking special courses through a local university, and attending professional meetings. Distance education through universities and educational institutes provide opportunities for employees to take college-level courses and obtain both undergraduate and graduate degrees without ever having to leave home.

The tremendous increase in new technology has increased the need for employees to train themselves. For individuals who are highly motivated, individual study and special training are excellent ways to increase job knowledge and skills. Independent study is especially important for employees who assume the responsibility of maintaining their own job skills. Although most employees do not have the motivation to undertake a special study program as an ongoing form of personal development, they can be motivated to do so if there are adequate opportunities for promotion and pay increases.²

Independent study has become much more convenient and inexpensive as a result of university professors who have created internet-based courses containing lectures and other course materials. These courses, called massive open on-line courses (MOOCs), are available to students anywhere in the world who have internet access. Although they can enroll in a class for free without being admitted to the university, they are normally required to pay tuition to receive credit for the course. Some of the most popular MOOCs provide training in business fundamentals, such as finance, strategy, and organizational behavior. Although the completion rate of these courses is very low, usually less than 5 percent, they provide valuable training for whatever time a student is involved.³

Online courses allow employees to pursue their educational objectives without leaving their jobs to become full-time students. An important advantage of online courses is greater flexibility for employees to adjust their academic assignments and deadlines with hectic work and family demands. Some universities offer accredited degree programs to students after they complete a sufficient number of online courses while other universities offer degrees through a combination of online and in-class courses called blended learning.

Although many HR managers are skeptical about the value of online courses, this skepticism is gradually fading; online courses are increasingly being seen as equivalent to other classes even though students cannot participate in classroom discussions. The disadvantages associated with missing a class discussion are largely offset by the benefits that come from chat board discussions, video-recorded lectures, and written assignments. Requiring students to provide written responses forces them to think more carefully about the issues, thus producing higher quality responses.

Some of the important issues to remember when considering an online course are the reputation of the school offering the courses, how the material is presented, how the students will be evaluated, the time needed to complete the assignments, the costs, and the students level of self-discipline. Online learning requires enormous commitment and self-discipline. People who are prone to procrastination seldom succeed in online courses and would probably do better in an in-class experience.

Tuition reimbursement programs provide a valuable incentive for employees to pursue additional education. Section 127 of the Internal Revenue Code allows employees to exclude from taxable income up to \$5,250 per year in employer-provided tuition assistance for under-graduate or graduate-level courses. Some companies reimburse employees for any course they take, whether they are seeking certification, pursuing a degree (associates, undergraduate, or graduate), or just furthering their education. Other companies only reimburse courses that are directly related to the employee's present position or have a direct relationship to a possible future position. Some companies pay the employee's tuition up front, while other companies reimburse employees after they provide evidence that they passed the course. Some companies provide 100% reimbursement for both tuition and textbooks, while other companies only provide partial reimbursements that depend on the course grade. Companies are encouraged to monitor their tuition reimbursement programs to ensure that they are meeting their strategic goals. Companies that monitor their tuition reimbursement generally continue funding them because their programs are cost-benefit effective: they improve job performance, enhance decision making and leadership competencies, increase computer and technology skills, stimulate personal career development, increase retention, and make employees more adaptable to change.⁴

Corporate Universities

Some organizations have invested heavily in training and development by creating a corporate university where employees can either attend classes on a corporate campus or in a virtual learning environment through e-learning. In some cases, organizations have created their own corporate universities because the skills and knowledge they required were not available in the labor force. The instructors at corporate universities include company trainers, executives, subject matter experts, external consultants, and university professors. Corporate universities are funded in two ways: as a line item in the annual budget or on a per-use basis by department, known as pay-as-you-go.

Corporate universities have grown in popularity and sophistication because they reduce the costs of training and make learning more convenient and adaptable. They are also praised for encouraging a learning culture, driving strategic change, and fostering creativity and innovation. Companies can expand their training and improve the flexibility of delivery through e-learning, such as webinars and teleconferencing. In corporate classrooms, executives can engage in face-to-face discussions where they share best practices and learn from each other. The challenges of integrating and preserving critical knowledge is facilitated by corporate university training where companies provide a complete learning life cycle that includes everything from orientation training to executive training.⁵

Vestibule Training

Vestibule training is similar to on-the-job training except that it occurs in a separate training area equipped like the actual production area. The training that occurs in a vestibule is usually some form of job-instruction training. In vestibule training, however, the emphasis is on learning as opposed to the emphasis on production in job-instruction training. Vestibule training is typically used for teaching specific job skills.

Vestibule training provides several advantages over other forms of off-the-job training. A major advantage is that positive transfer of training results because the environments of the vestibule and the actual job setting are similar. Other advantages are that vestibule training provides ideal learning conditions, such as immediate reinforcement, accurate feedback on performance, and an opportunity for practice and repetition without excessive concern about making mistakes. However, a separate vestibule area that is used only for training can be expensive to maintain unless training sessions are held frequently.

Lecture

An efficient means of transmitting large amounts of factual information to a relatively large number of people at the same time is the lecture. The lecture is the traditional method of teaching and is used in many training programs. A skilled lecturer can organize material and present it in a clear and understandable way. If the trainees are ready to receive it, a well-prepared lecture may succeed in transferring conceptual knowledge. However, a lecture does not allow active participation by the learners. Furthermore, since the lecture is a one-way communication process, it provides no practice, no feedback, no knowledge of results, and it may inhibit the transfer of learning.

Case Studies

Case studies are used extensively in many business classes. They are designed to promote a trainee's discovery of underlying principles. Most cases do not have a single correct solution. Instead, a trainee is expected to analyze the problem and consider alternative solutions. Even though trainees may not agree on the best solution, a fair amount of agreement about the relevant issues should exist. Some cases are short and focus on a specific problem or issue. Other cases are long and unstructured, encouraging participants to consider a variety of diagnostic approaches and alternative solutions.

The success of the case method as a training technique depends largely upon the skill of the discussion leader. Effective case discussions require skilled trainers who know when to focus the group's discussion on particular topics and when to allow free-floating ideas and exploration into alternative issues.

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Conferences and Discussions

Conferences and group discussions are used extensively for making decisions; however, they also can be used as a form of training. Conferences and discussions provide forums where individuals are able to learn from one another. A major use of group discussion is to change attitudes and behavior. Numerous studies have shown that individuals are much more inclined to change their attitudes if they participate in a group discussion and arrive at a group consensus regarding a topic than if they listen to a lecture.⁹ An example of a group discussion that can be an effective means of training is one in which supervisors discuss the performance-evaluation procedure and develop common criteria for evaluating performance. One study showed that a group of supervisors who discussed their performance evaluations among themselves were more consistent and accurate in their ratings than supervisors who listened to a lecture or who were simply given performance-evaluation guidelines by personnel. Group discussions have also been used successfully in empathy training to help nurses and other hospital workers develop greater sensitivity in caring for patients.⁷

Role Playing

In a role playing situation, participants assume specific characterizations and act out a particular situation or problem. Rather than simply talking about what the solution should be, the participants attempt to solve the situation as if they were the real individuals involved. Role playing usually creates a higher level of participation and enthusiasm among the participants than regular group discussion. Some participants enjoy role playing because it provides an opportunity to display their talents. Other participants, however, feel embarrassed and uncomfortable. One of the most effective uses of role playing is to facilitate attitude change. The best procedure for changing attitudes is to have participants play roles in which they are asked to express attitudes that are the opposite of their own personal feelings. A similar procedure is to ask participants to play the roles of people with whom they typically conflict. These situations are called counterattitudinal role playing and **role reversal**. In such situations the trainees are forced to verbalize a set of opinions that are contrary to their own private opinions. When individuals participate in counterattitudinal role playing, their private opinions typically shift in the direction of the arguments they present.⁸ This suggests that an effective training technique for reducing the conflict between a supervisor and a union steward might be to have them reverse roles in a training situation and try to resolve their differences.

The effectiveness of role playing can be increased by the use of video recordings and freeze framing. Video replays allow trainees to observe what they did and decide what they need to change. **Freeze framing** consists of pausing a role play episode and asking the participants and possibly observers to critique what is happening. Freeze framing is especially useful for learning managerial skills. At timely moments the trainer instructs the trainees to freeze their own performance and to suggest other strategies that might have been tried. The rest of the trainees are also given an opportunity to provide input.

Simulations and Business Games

Simulations refer to creating an artificial learning environment that approximates the actual job conditions as much as possible. Simulations have been used extensively for learning technical and motor skills. Pilot training is facilitated by using a flight simulator that reproduces the cockpit of an airplane. One simulation for training Air Force pilots allows the trainees to fly missions against manned and computer-generated threats. Pilot trainees receive feedback on whether the responses they make are correct or incorrect. The Air Force also has a very elaborate simulator that is a replication of an actual missile control room that is used to train missile crews. Many different kinds of learning situations can be simulated with or without the use of a computer. The in-basket simulation is one of the simplest forms of simulations. In this exercise the trainee is asked to assume the role of a new manager or supervisor confronted with a set of instructions describing the new job and a series of memos outlining problems that need to be resolved. The trainee is given a limited amount of time, usually two hours, to read the memos and respond as if it were a real-life situation. The trainee makes decisions, replies to the memos, schedules meetings, and may even develop agendas for the meetings. Afterward, the trainee's decisions are evaluated, and feedback is given about the advantages and disadvantages of alternative actions.

Business games provide learning opportunities for trainees to make business decisions as if they are managing a company. These games tend to be highly motivating because they incorporate many of the fundamentals of game mechanics, such as competition, immediate feedback, risk, variable rewards, and clear goals. In one simulation, the Business Management Laboratory, participants are asked to assume the leadership of a small manufacturing company competing with companies managed by other trainees.¹⁰ The participants make decisions on production, pricing, hiring and training new sales representatives, and other production and financial concerns. The decisions are analyzed by an algorithm that approximates real-life conditions, and the participants receive reports, such as an income statement and a sales report, similar to the reports actually received by managers.

Computer simulations allow participants to examine the long-term effects of their business decisions in a relatively short period of time. If they make bad decisions, they can learn from their mistakes without having to suffer the actual consequences of real-life circumstances. Business simulations also motivate students to learn on their own. Students will voluntarily master even difficult concepts, such as break-even analysis and linear programming, if making an effective decision requires it.

Programmed Group Exercises

Programmed group exercises, sometimes called **experiential group exercises**, involve trainees working together in a discussion group to solve a specific problem. Although the problem may be artificial, the participation by each trainee within the group is not artificial. Participants interact with each other as if they were in a real problem-solving situation. After the decision has been reached, participants discuss what occurred, analyze the group processes, and analyze the behavior of each person in the group. Valuable learning occurs not only during the actual exercise but also during the following discussion.

One of the best-known experiential exercises is the NASA exercise. In this exercise the participants assume that they have crash-landed on the lighted side of the moon. They are asked to rank 15 items in order of importance in helping them travel 200 miles to reach the mother ship. Each participant ranks the 15 items, then groups of five to seven participants try to reach a consensus ranking. The groups often experience conflict in attempting to reach a consensus decision. Many important group processes can be observed during this exercise, such as leadership, communication, persuasion, decision making, problem solving, and conflict resolution. The most important insight for the participants is not whether 50 feet of nylon rope is more or less important than a magnetic compass for survival on the moon but how they can interact with each other to allow the maximum sharing of knowledge.

Most assessment center activities include programmed group exercises that require participants to work together on various group exercises. Therefore, these activities are useful in identifying potential managers as well as in providing training. Assessment-center activities help employees achieve greater self-awareness and learn valuable principles of management and supervision. Some companies have found that the observers learn as much as the participants, if not more. As a side benefit of the training they receive, the observers learn which behaviors they should acquire to increase their own effectiveness. A popular form of experiential exercise is **outdoor experiential training (OET)**, known variously as outdoor challenge training, adventure learning, executive challenge, outdoor management training, and personal growth training. These programs are intended to improve the effectiveness of managers in such skill areas as teamwork, problem solving, risk taking, self-esteem, and interpersonal communication. These programs include wilderness experiences and ropes courses. Wilderness experiences typically involve participants in living outdoors and engaging in such activities as sailing trips, backpacking, whitewater rafting, canoeing, extended camping, and mountain climbing. Ropes course activities include rock climbing, rappelling, crossing canyons by rope, and constructing bridges to cross lakes. Limited studies evaluating the effectiveness of these courses suggest that they improve the overall functioning of work groups and that these improvements persist for more than a year.¹⁰

Television and Video

Visual training materials can appear in several forms, that include television, video recordings, digital video disks (DVDs), and computer-generated presentations. The films may portray actual people in real-life situations, or they may be animated cartoons. Both actual and animated films serve useful purposes. Real-life photography can make the training seem real and factual, but drawings can emphasize expressions, emotions, and ideas with few conflicting stimuli. Television has become increasingly popular as a method of presenting business training. Some organizations have their own private networks that present training programs produced by the company. Another use of television is teleconferencing, which broadcasts programs that may be created live in broadcast studios located hundreds of miles apart.¹¹

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Television and Video

Visual training materials can appear in several forms, that include television, video recordings, digital video disks (DVDs), and computer-generated presentations. The films may portray actual people in real-life situations, or they may be animated cartoons. Both actual and animated films serve useful purposes. Real-life photography can make the training seem real and factual, but drawings can emphasize expressions, emotions, and ideas with few conflicting stimuli.

Television has become increasingly popular as a method of presenting business training. Some organizations have their own private networks that present training programs produced by the company. Another use of television is teleconferencing, which broadcasts programs that may be created live in broadcast studios located hundreds of miles apart.

Video recordings can be used for many purposes. Athletes often watch films of their performances to identify weaknesses that they may use to their advantage. Videotaping actual behavior can be just as useful for management trainees. The trainees can observe how they responded in a particular situation and can diagnose their behavior.

Many training films have been developed to portray particular insights about management, supervision, and other technical skills. A major advantage of presenting information by film rather than by lecture is that films can be edited to minimize the amount of distracting information and to maximize learning. Geographically dispersed companies have found videos a convenient way to transmit new ideas from headquarters or a training office.

One of the most promising uses of video is to illustrate correct behavior patterns for imitative learning. Social cognitive theory has shown that observing the behavior of others is one of the most effective ways of developing new skills. Watching recorded video of effective management behaviors is a powerful learning tool for management trainees. An excellent way to help supervisors learn new skills is to let them see how effective supervisors behave in situations similar to their own.

Asynchronous Learning Networks

Asynchronous Learning Networks (ALN) are networks of people designed for anytime, anywhere learning. ALN combines self-study with substantial, rapid, asynchronous interactivity with others who are involved in the learning process. In ALN, learners use computer and communications technologies to work with remote learning resources, including coaches and other learners, but without the requirement to be online at the same time. The most common ALN communication tool is the internet.

By this definition, a web-based workshop that requires frequent online conferencing and collaboration with others is an ALN. Another example of an ALN is a text- or computer-based training course that requires learners to use email to discuss assignments with each other and with the coach. ALN also encompasses in-person orientation meetings, proctored examinations at a specified time and place, occasional synchronous online chat sessions, and lab sessions for near-campus learners.

By this definition, teletraining, which is based primarily on a synchronous audio or video presentation or conference, is not an ALN because teletraining requires learners and instructors to constantly be available at the same time. Videotaped courses, mail-based correspondence courses, and computer-based training are not ALN because they do not include substantial and rapid interactivity with others, even though the learner might send in a paper or test and receive a reply some time later.

Computer-based Training

During the 1960s programmed instruction was the newest fad in training and education. Although it was not used extensively at that time, it eventually served as the model for the creation of computer-assisted instruction. **Programmed instruction** is an application of the principles of operant conditioning in which learners are presented with a series of concepts and after learning each concept they are required to demonstrate their understanding by answering multiple choice questions.

Computer-based training (CBT) refers to any form of interactive learning experience between a computer and a learner in which the computer provides the majority of the stimulus and the learner is required to make some form of response during the learning. Some companies, such as Hewlett-Packard and Dow Chemical, have moved almost all of their training to internet-based e-learning platforms - Learn@HP and Learn@Dow now.

The concepts in computer-based training can be organized according to a logical sequence wherein earlier concepts serve as building blocks for more complex learning. This method is called **linear sequencing**, as opposed to a branching format that allows subsequent information to be determined by the learner's responses. If the response is correct, the computer proceeds to the next concept. If the response is incorrect, the computer explains why and provides additional information and another question to help trainees master the concept.

The performance of the trainees is used as an indication of whether the learning material is properly described and appropriately sequenced. If most trainees have difficulty with a particular concept, then the material is rewritten to clarify it. The material is revised until most trainees can make the correct responses on their first time through the material.

One of the learning benefits of CBT is that each learner is required to respond to every question, something a traditional classroom does not typically provide. Other differences are the absence of embarrassment for wrong answers and the opportunity for learners to proceed at their own pace, or even go back to review if they desire. Computer programs are infinitely patient and repetition of a lesson can continue endlessly.

Hundreds of computer-based training courses have been developed, including programs for teaching basic literacy to nonreaders, instructing doctors how to diagnose ulcers, teaching executives how to manage, and training pilots how to fly. Producers of these programs claim that CBT training reduces the time required to learn by 30 percent or more in most cases and that retention is increased.¹²

The number of developmental hours required to produce one hour of CBT ranges from 120 to 300 hours. Although most courses are expensive to develop, and the equipment is costly, CBT can be less expensive than other forms of training if a large number of students need to be trained, and the knowledge is not expected to change for several years.

New computer-based training opportunities have been developed by companies using their own intranets to provide information that can be updated and changed continually. An intranet that connects employees who may be geographically dispersed can be used to disseminate specific product information, safety training, and many other forms of information, including specific human resource policies and programs.

The internet allows learners to access information from various sources, such as trade organizations, professional associations, and government agencies. Excellent and timely information can be obtained from such locations as the ASTD Online, provided by the American Society for Training and Development, or the SHRM Fast Facts, provided by the Society for Human Resource Management. Many universities now offer courses on the internet. These courses are completely paperless—the instructions and enrollment forms are on the internet, the text material is on the internet, hyperlinks to other relevant sites are contained in each lesson at appropriate locations, the exams are taken and scored over the internet, and essay questions are answered, submitted, and evaluated by email.

Teletraining and e-Learning

It is possible for a trainer to be in one location while the learners are in many other locations watching the trainer on a television or computer monitor. This type of training, also called teleconferencing, webinars, or e-learning, may even include multiple trainers broadcasting from different locations as a panel of experts with the capacity to interact with their audience.

In the beginning, e-learning focused primarily on technical and functional skills that were presented in a one-way format. Quickly, however, the content was enlarged to include training in soft skills, such as team management, communication, decision making, leadership, delegation, and conflict resolution. Language skill acquisition, especially English, has also been a popular e-learning topic. The delivery of e-learning has broadened to include self-paced interactive modules that allow managers to complete the training online with follow-up meetings in a virtual classroom via conference calls and also face-to-face classroom discussions.¹³

Teleconferencing owes much of its growing popularity to its capacity to train many learners in different locations without the inconvenience or cost of bringing them together. The modes of teleconferencing, or teletraining, include computer, audio, video, or any combination of these three. Teleconferencing requires higher levels of skill for the trainers because they may be speaking only to a video camera and unable to observe how well their ideas are being received. Greater demands are also placed on the learners, who are encouraged to ask questions and provide feedback to the trainer. The comments of those who have participated in teleconferencing suggest that the motivation to learn is apparently not diminished by teleconferencing, and the amount of practice and transfer of learning do not differ between teleconferencing and traditional learning.¹⁴

Topic 3: Training and Development Techniques

- 3.3.1 Training and Development Techniques
- 3.3.2 Training Methods and Processes
- 3.3.3 On-the-job Training Methods
- 3.3.4 Off-the-job Training Methods
- 3.3.5 On-the-job Versus Off-the-job Training
- 3.3.6 Test Your Knowledge

3.3.5 On-the-job Versus Off-the-job Training

On-the-job Techniques

There are several advantages to on-the-job techniques that probably explain why they are used so frequently.

- No special space or equipment is usually required for on-the-job training.
- On-the-job training is practical since employees produce and earn while they learn.
- On-the-job training provides an immediate transfer of training.
- On-the-job training allows employees to practice what they are expected to do after training ends.
- On-the-job training allows trainees to associate with their future coworkers and to observe and model the behavior of these coworkers.

Off-the-job Techniques

Many activities that occur off the job help learners perform better. Most off-the-job training programs are viewed as supplemental rather than as central to learning the job. Off-the-job training generally focuses more on long-term development and general education than on the skills and information needed to perform a specific job. The types of off-the-job training programs may vary from brief conferences and workshops held during the workday to formal education courses provided by a college or university.

The major disadvantage of off-the-job training is that it does not provide immediate transfer of training to real job situations. However, the advantages of off-the-job training sometimes compensate for this lack of transfer. Removing the learner from the actual job situation may facilitate the learning process. Expensive equipment is not tied up during the learning process, and errors and waste do not become troublesome problems because trainees are not holding up an actual production process. Because off-the-job programs focus more on learning and less on production, they provide trainees with an environment that is conducive to concentrating on new ideas and engaging in reflective thought.

Formal training away from the job also provides other benefits:

1. They allow executives to get away from job pressures and work in a climate in which party-line thinking is discouraged and self-analysis is stimulated.
2. They provide resource people and resource materials—such as facility members, other executives, and books—that contribute suggestions and ideas for the executives to consider as they attempt to change, develop, and grow.
3. They challenge executives to increase their development and motivate them to improve.