

**THE HANDBOOK OF  
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**Malcolm S. Knowles** (Ph.D.) has retired from his last academic position but is busier than ever conducting workshops and consulting with a wide variety of organizations in the United States and abroad. The major focus of these HRD activities is on modern concepts of adult learning and their implications for HRD. In his long career, he has held numerous positions. Among them are director of training, National Youth Administration, Massachusetts; director of education for various YMCAs; executive director of the Adult Education Association; and professor of adult education at Boston University and later at North Carolina State University. He has written a great number of very popular publications.

### Adult Learning: Theory and Practice

HRD is based in learning, and every HRD practitioner, no matter what the area of adult learning the role or sub-role, should be competent in several people have contributed to our under theory. In recent years, several people have contributed to our understanding standing of that theory. One of the most significant is the author of this chapter.

In this chapter, Malcolm Knowles provides a broad overview of the background of adult learning and discusses some of the most prevalent theories. He does not opt for one over another; rather, he indicates when the different theories would be most appropriate.

Knowles also discusses andragogy, and who is better suited to do this? He is credited with introducing the andragogy concept into the field of learning in the United States.

Here Knowles brings all of his expertise together and relates it specifically to human resource development.

### A Historical Perspective

Would it surprise you if I told you that the earliest thinking about the nature of learning concerned learning for adults? All of the great teachers of ancient times were teachers of adults, not children. In ancient China, Confucius and Lao Tse were teachers of adults, not children. The Hebrew prophets and Jesus were teachers of adults, not children. The ancient Greeks-Socrates, Plato, Aristotle-were teachers of adults, not children. The great teachers in ancient Rome-Cicero, Quintilian, and Euclid-were teachers of adults, not children. Since their experiences were with adults, they perceived learning very differently from the way later teachers came to perceive it. To the teachers of ancient times learning was a process of active inquiry on the part of the learners, and they invented techniques for involving the learners in active inquiry. The ancient Chinese and Hebrews invented what we would now call the *case method*. One member of a study group (not necessarily the leader) would present a paradox-often in the form of a parable-and the group would examine its background and explore possible resolutions. The ancient Greeks used what we now call the method of the *Socratic Dialogue*, in which a member of the study group would pose a question, and the group would pool their resources to arrive at an answer.

With the fall of Rome in the second and third centuries AD, the writings of these ancient great teachers were deposited in the archives of European monasteries and largely forgotten. When schools for children became systematically organized between the seventh and twelfth centuries - first in the cathedrals and monasteries and later in secular institutions-a different perception of the nature and purpose of learning gained prominence. The concepts *teachers* and *teaching* were invented, and *learning* was defined as a process of transmitting content (mostly knowledge and skills) from teachers to students. This was often known as the "empty vessel" theory, since the teachers saw themselves as filling the empty vessels of students from their own reservoirs of content.

This approach to learning came to be labeled *pedagogy*, a term derived from the Greek words *paid*, meaning "child" and *agogus*, meaning "leader of." Because the experiences of the teachers of this era were exclusively with young children, and because they were concerned primarily with teaching the basic skills of reading, writing, and arithmetic, they made very different assumptions about the learning process from those made by the ancient great teachers. They assigned to the role of teacher full responsibility for making all decisions about what should be learned, how it should be learned, when it should be learned, and if it had been

Learned - leaving the students pretty much in the role of passive, dependent recipients of the teachers' transmissions. When public schools were established in the early nineteenth century, this pedagogical model was the only one school people of that time had to follow, and so our entire school system was established on the basis of the pedagogical model.

Unfortunately, when adult education was organized systematically during the first quarter of this century, the pedagogical model was the only model teachers of adults had as well. As a result, most adults have been taught as if they were children. This is the primary cause of many of the problems adult education teachers have encountered—problems such as high drop-out rate, low motivation, and poor performance. Until recently, this same affliction characterized many of the human resource development programs in business and industry.

## The Beginning Of Theorizing About Adult Learning

In 1926, the first book attempting to explain the unique characteristics of adults as learners was published. Edward C. Lindeman's *The Meaning of Adult Education* is still one of the most insightful and inspiring works in the literature of adult education. In the following quotation he captured what later research has shown to be the essence of adult learning.

I am conceiving adult education in terms of a new technique for learning, a technique as essential to the college graduate as to the unlettered manual worker... It represents a process by which the adult learns to become aware of and to evaluate his experience. To do this he cannot begin by studying "subjects" in the hope that some day this information will be useful. On the contrary, he begins by giving attention to situations in which he finds himself, to problems which include obstacles to, his self-fulfillment. Facts and information from the differentiated spheres of knowledge are used, not for the purpose of accumulation, but because of need in solving problems. In this process the teacher finds a new function. He is no longer the oracle who speaks from the platform of authority, but rather the guide, the pointer-out who also participates in learning in proportion to the vitality and relevancy of his facts and experiences. In short, my conception of adult education is this: a cooperative venture in non-authoritarian, informal learning, the chief purpose of which is to discover the meaning of experience; a quest of the mind which digs down to the roots of the preconceptions which formulate our conduct; a technique of learning for adults which makes education coterminous with life and hence elevates living itself to the level of adventurous experiment.<sup>1</sup>

In 1928 Edward L. Thorndike published his classic study of adult intelligence, *Adult Learning*. He posited that the ability to learn did not decline until age 35, and then it declined only 1% per year—thus rebutting the prevalent folklore of that time that "you can't teach old dogs new tricks." (However, research by Thorndike's successors showed that it was the speed of learning, not the power to learn, that declined.) During the next 30 years, reports by successful teachers of adults appearing in the periodical literature described how teachers were forced to depart from the pedagogical model to maintain interest and retain their students. Research-based knowledge about adult learning was contributed from other social science disciplines: Clinical psychology added knowledge about the process of behavioral change; social psychology, about the effects of environment on learning; sociology, about the consequences of institutional policies and procedures, norms, and reward systems; and developmental psychology, about the stages of development during the adult years.

By the late 1950s, European adult educators felt the need for a term that would enable them to discuss this growing body of knowledge about adult learners in parallel with pedagogy. They coined the word *andragogy*, derived from the Greek words *anere*, for "adult," and *agogus*, meaning "the art and science of helping students learn." Although this term has not yet appeared in any of the standard dictionaries, it is now widely used by adult educators around the world to describe a theory of adult learning.

## The Meaning And Practical Use Of Theories

A theory, as described here, is a set of principles or propositions that attempt to explain and, it is hoped, predict phenomena. A theory can, therefore, provide guidelines for action. As the great social scientist Kurt Lewin is said to have stated, "There is nothing as practical as a good theory." Presumably, if we have a "good" theory about an HRD situation, we will know what learning strategies to use in dealing with it.

But how do we know if we have a good theory? Since all theories are derived from models of the phenomena they are trying to explain, it helps to know what model of reality a given theory is using so that we can determine if the particular model is realistic for the particular situation.

For example, Newton derived his theory of energy ( $E = m$ ) from a model of the universe in a stable state. Given that model, it was reasonable to define energy and mass as interchangeable. But toward the end of the last century when more powerful telescopes determined that the universe was not stable but was expanding at a rapid rate, a new ingredient, velocity, had to be added to the theory. Einstein did it with his formula ( $E = mc^2$ ), and the whole new world of atomic energy was opened up to us.

Since we are concerned with the learning of human beings, we need to determine the model from which each theory is derived. Then we can decide whether that model is realistic for the particular situation. Essentially, there are three groups of learning theories that stem from three different models of human beings:

1. *Mechanistic (or behaviorist) theories.* These theories equate humans with machines in that, as with machines, if you introduce an input (stimulus) into a human being and control how that input is processed (operant conditioning), you will get a predetermined output (response). According to this set of theories, the purpose of education is to produce prescribed behaviors—the behaviors the teacher decides the learners should perform. These are commonly known as "S-R" (stimulus - response) theories.

2. *Cognitive theories.* These theories equate man with brain, based on the proposition that the one thing that distinguishes human beings from other living things is that they possess brains that are capable of critical thinking and problem solving. The purpose of learning, accordingly, is to teach the brain to engage in such critical thinking and problem solving.

3. *Organismic (or humanistic) theories.* These theories hold that human beings, like all living organisms, have their own genetically determined, unique, individual potential. The purpose of learning, therefore, is to encourage each individual to develop to his or her full, unique potential.

Each model prescribes its own preferred strategies of learning. The mechanistic model prescribes programmed instruction, teaching machines, behavioral modification, linear computer-assisted instruction, teaching to terminal behaviors, and drills. The cognitive model prescribes didactic instruction, rote memorization of information or procedures (e.g., steps in problem solving), and standardized testing of "right solutions" to preset problems. The organismic model prescribes discovery methods, individualized learning projects, and self-directed learning.

The proponents of each set of theories tend to present them as absolute, excluding the validity of any other theories. Thus the behaviorists (or mechanistic theorists) - Pavlov, Thorndike, Watson, Skinner, Mager, and others—hold that learning occurs only when a learner is conditioned to give the "right" response to a given stimulus. The cognitive theorists - Piaget, Bruner, Gagne, and others—hold that learning occurs only when learners acquire the time-tested principles and strategies of critical thinking and problem solving. And the humanistic theorists - as epitomized by Carl Rogers - hold that learning occurs only when learners have the "freedom to learn" what is particularly relevant to their personal life situation.

Each theory is appropriate under particular conditions, since each of us behaves like a machine, a brain, and a living organism under different circumstances. When we want to learn a mechanical operation, such as how to operate a strange machine, the behaviorists are in touch with that reality, and behaviorist strategies, such as operant conditioning, are appropriate. When we want to learn to analyze a document critically, then instruction in procedures of critical analysis is appropriate. And when we want to develop our unique style, increase our self-understanding, or enhance any other aspect of our "selves," then humanistic strategies, such as self-directed inquiry, are appropriate.

Let me illustrate this position by applying it to what I am doing now—writing a chapter for a book. The first thing I had to learn was how to use a typewriter by touch. Actually, I learned this in high school, when my typing teacher told me which fingers should hit which keys. While I practiced, she hovered over me tapping my fingers with a little rod each time I hit a wrong key. She had announced at the beginning that the terminal behavior objective for the class was for each student to type 60 words a minute with a maximum of three errors per page. Through conditioning with punishments and rewards, we achieved that objective.

Having learned to operate the machine efficiently, I wanted to learn how to use it to write term papers, letters, and, eventually, articles and books. I took courses that taught me to think logically, to read critically, to use acceptable standard forms for letters and papers, and many other cognitive operations. But I wanted to learn to use my typewriter to write creative essays, poetry, and original books in a style of my own. I did this by reading many essays, poems, and books, comparing the styles of different authors to determine which aspects of their styles felt best to me, experimenting, and getting people's reactions to what I wrote.

Applying this position to business operations, behaviorist strategies are preferred in situations where employees need to learn basic skills. When cognitive operations are involved, didactic teaching is preferred. But when more complex and self-developmental operations are involved, humanistic strategies are preferred.

## **The Andragogical Theory Of Learning**

What do we know at this point about the characteristics of adults as learners and the adult learning process? Since adult learning is a relatively new subject of scientific investigation, much of what we think we know about it is based upon intuitive experience with adult learners. An increasing volume of our knowledge is, however, derived from rigorous research.

Consequently, the theoretical framework for thinking about adult learning consists of "assumptions" or "concepts" rather than of "knowledge." So far, most of what we have learned through experience has been borne out by research.

Here are the most important assumptions we now make about adults as learners:

1. *The need to know.* Adults learn more effectively if they understand why they need to know or be able to do something. We have a dictum in adult learning that the first task of the teacher is to create an awareness of "the need to know" on the part of the learners. When adults undertake to learn something on their own, they explore the benefits of learning versus the costs of not learning before they invest their time and energy. In HRD programs, those employees who choose to participate in a learning activity may already have a good idea as to how it will benefit them. But employees who are "sent" to a learning activity by their supervisors or managers or who otherwise feel that they are participating under compulsion are not likely to understand the benefits and so will not have a deep commitment, in fact may even be resistant, to learning. Hence, it is important that a strong case be made for the personal benefits they will gain. The more directly they can experience or see the benefits, in contrast to merely being told about them, the more strongly they will feel "the need to know."

2. *The need to be self-directing.* Adults have a deep psychological need to take responsibility for their own lives-to be self-directing. In fact, the psychological definition of *adult* is "one who has arrived at the self-concept of being in charge of one's life, being responsible for one's own decisions and actions." This is a self-concept that starts forming quite early in life and is accelerated as we become aware of being biologically mature (able to reproduce), legally mature (able to get a driver's license, vote, buy liquor, etc.), and socially mature (start performing such adult roles as those of worker, spouse, parent, etc.). The process of developing a self-concept of adulthood can be facilitated by cultural conditions that encourage individuals to take increasing responsibility for themselves, or it can be retarded by cultural conditions that keep individuals dependent on others to make their decisions for them (as is the case in many home and school cultures in our society). Accordingly, some individuals who come from home and school experiences that encourage them to take responsibility for themselves arrive at the self-concept of adulthood earlier than others.

At some point in our lives, however, each of us becomes aware that we are fully adult-that we are capable of being self-directing. At that point we experience a deep psychological need to be perceived and treated by others as being capable of taking responsibility for ourselves. From then on, whenever we find ourselves in situations in which we feel that others are making our decisions for us-whether supervisors, teachers, or organizational leaders-we experience a resentment of and resistance to that situation.

This psychological reality presents a special problem to those of us in HRD and adult education. When adults enter into any activity that is labeled "education" or "training" or any of their synonyms, they revert back to their previous experiences in school, put on their dunce hats of dependency, sit back, fold their arms, and say "Teach me." They have been conditioned to perceive the role of student as a dependent role, and they expect the teacher to direct them.

Over the last several years, it has become increasingly apparent that this is a problem. Examples of innovative strategies that try to help adults make the transition from dependent learners to self-directing learners as described in Boud<sup>2</sup>, Griffith<sup>3</sup>, and Knowles<sup>4</sup>. Adults need to be prepared for a first experience with self-directed learning through an orientation experience, before being plunged into it. This orientation can be as brief as one hour or extended to five days, depending on the time available and the complexity of the learning experience. In either case, the critical components of an orientation to self-directed learning are: (1) an exposure to the ideas that differentiate being taught from learning<sup>5</sup>; (2) a relationship-building and resource-identification exercise<sup>6</sup>; and (3) Borne practice exercises to sharpen skills in self-directed learning<sup>7</sup>. Adults who are asked to take some responsibility for their own learning for the first time will experience a degree of confusion, tension, and anxiety initially. But as they start working on their own self-planned learning projects, they get "turned on" to learning and invest more energy in self-directed inquiry than could ever be required of them in didactic instruction.

Self-directed learning does not mean learning in isolation or learning without help. The most effective self-directed learners are highly skillful in getting help from peers, teachers, printed materials, audiovisual aids, and every other kind of resource. The key distinction between learning and being taught is the locus of responsibility; in didactic teaching the locus of responsibility is in the teacher, whereas in self-directed learning it is in the learner. When learners take some responsibility in the learning process, they learn more, retain what they learn longer, and learn more efficiently.

3. *Greater volume and quality of experience.* Adults, by virtue of having lived longer, accumulate a greater volume and a different quality of experience than children and youth. The greater volume is self-evident - they have done more things, and the longer they have lived, the more things they have done. The different quality of experience stems from their having performed such roles as M time worker, spouse, parent, and responsible citizen, which children and youth do not usually perform.

Several consequences flow from these differences of experience. First, it assures that every group of adults will be heterogeneous and that the greater the mix of ages and backgrounds in the group, the greater the heterogeneity will be. Hence, the emphasis in adult learning is on the individualization of "Instruction"-the provision for a wide choice of learning strategies and resources and the extensive use of subgroups or networks linking people with similar backgrounds (when that is appropriate). Important as it is to take into account individual differences in providing learning for children and youth, it is much more necessary to take them into account in providing learning for adults.

Second, since adults enter into a learning situation with more experience, they are a richer source for learning-for themselves and for one another. In fact, for many kinds of learning the richest resources are often the learners. This is why, in adult learning, so much emphasis is placed on experiential techniques that tap into the experience of the learners or provide them with experiences from which they can learn (e.g., group discussion, simulation exercises, field experiences), and less emphasis is placed on transmittal techniques.

A third consequence of their greater experience is that adults may have developed habit patterns, preconceptions, prejudices, and rigid ways of thinking that may interfere with their learning. This danger can be minimized by building into the learning designs some mind-opening or "unfreezing" activities, such as a "mini" sensitivity-training session.

Perhaps the most important, if most subtle, consequence of adults' greater experience is that whereas children and youth derive their self-identity primarily from external sources (their parents, their peer group, their school, their youth organization), adults derive their self-identity primarily from their experience; they are their experience. Accordingly, if we ignore or undervalue their experience in a learning session, it is not just their experience that they feel is being rejected; they feel rejected as persons.

*4. Readiness to learn.* Whereas youth have been well conditioned to be ready to learn what they are told they should or have to learn, adults become ready to learn those things that they perceive will bring them greater satisfaction or success in life. One of the chief sources of "readiness to learn" is the developmental stages or "transitions" we pass through during the adult years. For example, as we move from being a student to becoming a full-time worker, we ready ourselves to learn the necessary skills to get and hold a job. As we move toward marriage, we become ready to learn about marital relations. As we move toward being a parent, we become ready to learn about infant care. As we move from being a worker to becoming a supervisor, we ready ourselves to learn about supervision, and so on.

Several implications for HRD flow from this concept of "readiness to learn." Perhaps the most important implication has to do with the timing of our offerings. Learning opportunities that are timed to coincide with the learners' readiness to learn are more likely to be effective than those that are out of step with it. In fact, some of the great errors in HRD have occurred as a result of individuals being pushed into learning programs for which they were not ready. Workers are not ready to learn about supervision, for example, until they feel that they have mastered the jobs they will be supervising.

We do not, however, have to sit by passively and wait for readiness to develop naturally; there are things we can do to stimulate it. We can expose people to "a better life" or a more satisfying performance through audiovisual presentations, simulation exercises, linkage with role models, career-planning programs, counseling, self-diagnostic procedures, and performance appraisal processes for needs assessment rather than screening purposes.

*5. Orientation to learning.* Whereas children and youth have been conditioned to enter into a learning activity with a subject-centered orientation to learning, adults have a life-centered, task-centered, or problem-centered orientation. While young people see the purpose of learning as accumulating subject matter so as to pass a test or earn credit toward a diploma or degree, adults see the purpose of learning as acquiring competencies that will enable them to cope more effectively with life, perform life tasks, or solve real problems. This difference in orientation toward learning has several implications for HRD.

One central implication has to do with how we organize the curriculum. We do not have subject-centered courses, such as Composition I, Composition II, and Composition III. Instead, we have Writing Better Business Letters, Writing Clearer Reports, and Communicating with the Public. It is not just that the titles of our offerings are different; the way we design the learning experiences is different. In Composition I the learners memorize the rules of grammar; in "Writing Better Business Letters" they write a variety of business letters and, by critiquing them, generate skills in grammatical writing. When teaching literacy skills to undereducated adults, do not give them courses in reading, writing, and arithmetic. Instead help them learn the skills of reading, writing, and computing that they need to have in order to be able to cope more effectively with their real life problems in the world of work, the world of local government and community service, the world of health care, the world of the consumer, and so on.

During this past year I have been trying to learn to use a microcomputer to write letters, articles, and books, and I have been having a difficult time. The instructional manuals and software programs are written by engineers who do not understand that adults are task-oriented learners. So they instruct me to memorize information about how the machine works and the commands that will make it work. I spent hours memorizing information I had no idea how to use, and I proceeded to forget most of it. Then I started teaching myself how to use the computer to write letters, articles, and books, and although the manuals were not very helpful, I eventually was able to get the microcomputer to do the work I needed. I would have learned much faster and more easily if the manuals and software programs had been organized around life tasks (i.e., how to write a letter, how to write a report, how to personalize form letters, etc.).

Examine your orientation programs to see whether they are organized around the real questions and problems new workers confront as they prepare to enter into a strange workplace or are merely transmitting information about the organizational structure, personnel policies, products, market, and financial practices of the company. Examine your programs in basic skills, communications, human relations, supervision, management, and the rest of your human resources development programs against the criterion of their task-centeredness.

## **Applying The Andragogical Model**

The mission of traditional teachers of both the behaviorist and cognitive theoretical persuasions is to transmit content, and so they employ a *content model* in planning and conducting their programs. They are dogmatic and ideological in their attitudes toward their respective theories. To a behaviorist, the stimulus-response-operant conditioning strategy is the only valid method. To the cognitive practitioners, didactic instruction is the exclusive solution to all learning situations. The andragogical model, on the other hand, is a *process model* that can incorporate principles and technologies from various theories and still maintain its own integrity.

In traditional learning, the teacher (or instructor or curriculum committee) decides in advance what knowledge or skills need to be transmitted, arranges this body of content into logical units, selects the most efficient means for transmitting this content (lectures, assigned readings, films, tapes, programmed instruction, etc.), and then develops a plan for transmitting these content units in a logical sequence. In contrast, the andragogical teacher (facilitator, consultant, change agent) prepares in advance a set of procedures for facilitating the acquisition of content by the learners. It is not that content is important to one and not to the other; it is that the transmission of the content is what is important to the pedagogue and the acquisition of the content by the learners is what is important to the andragog. Andragogs see their role as twofold: first as the designers and managers of the processes for facilitating learning and second as content resources. Even in this secondary role, they see themselves as not only direct content resources but also as the link to many other content resources (in a way, as educational brokers).

## **Establishing a Climate Conducive to Learning**

Just as in the past decade or more we have witnessed a growing concern for the quality of environments for living, so during the same period has there been increasing concern among educators for the quality of environments for learning. Valuable information about the effects of the physical properties of environment on learning has come from the ecological psychologists. The social psychologists have uncovered important effects of the human environment-especially the influence of the quality of interpersonal relations. And from the industrial psychologists and sociologists have come many useful insights about the effects of the organizational environment-the structure, policies, procedures, and norms of the institutions in which learning takes place.

In developing a process design, consider two aspects of climate: the physical climate and the psychological climate

In designing a physical environment, the fertile brain of man could not possibly create one that is less conducive to learning than the typical classroom-with chairs in rows facing a lectern in front. That design announces to anyone entering the room that the name of the game here is one-way transmission; the appropriate role for the learners is to sit passively and dependently and absorb the transmission from the lectern. I make a point of going to an assigned room and "casing the joint." When I find it set up as a classroom (which is the only way most custodians know how to set it up), I move the lectern to a distant corner and rearrange the chairs in one big circle, if that is possible, or, if not, in several small circles, preferably around tables. The room's design should announce that the name of the game here is active participation. Of course, provision must be made for creature comforts, such as temperature, ventilation, easy access to rest rooms, breaks for refreshments, comfortable chairs, adequate light, and good acoustics.

As important as physical climate is, psychological climate is even more important. The following are the characteristics of a psychological climate that is conducive to learning:



**A climate of mutual respect.** People who feel respected are more open to learning. If they feel that they are being talked down to, that their experience is being ignored or denigrated, that they are regarded as not being capable of taking responsibility and making decisions for themselves, they will dwell on these feelings.

To create a climate of mutual respect, have the participants use bold felt pens to make large name tents on folded 5X8" cards; people feel more respected if they are addressed by name. Arrange groups of five or six people and have them share things about themselves: what they are (their positions and work background); who they are as unique human beings (one thing about themselves that will enable others to see them as unique); what special resources they are bringing with them from their previous experience that others might tap into; and what questions, problems, and concerns they are hoping will be dealt with in this session. Be a role model by presenting this information about yourself. This will establish a "human" relationship with the participants from the outset. Ask one person in each group to volunteer to give a summary of the information generated in the table discussions, or shorten the time required by calling out categories of their "whats" (institutional settings, roles) and resources and have the table reporters give only the questions, problems, and concerns. Listen very carefully to what participants say. If there is any doubt in your mind as to what they mean, repeat what you think they said in your own words and ask if that is what they meant. This conveys respect for their contributions.

**A climate of collaborativeness, not competitiveness.** Creating such a climate is difficult because adults have been conditioned by all of their previous school experience to perceive the proper relationship among students to be that of competitors. The norm-referenced grading system, in which each learner's performance is compared with that of others, automatically induces a rivalrous attitude. Indeed, in many situations in school, one student helping another is defined as cheating. In adult learning, often the richest resources for learning are within the group of learners, therefore peer helping and sharing are critical. The group-sharing exercise described earlier helps to set the standard that it is expected that learners will help one another.

**A climate of supportiveness.** Adults often enter into a learning activity with some anxiety. If they did not do well in earlier schooling, or if they have not been exposed to formal instruction for some time, they may also have a negative self-concept as learners; they may worry about being embarrassed in front of their peers by asking dumb questions or giving dumb answers. Therefore, it is important that the teacher be a supportive person, accepting all contributions as being worthwhile and building on them so as to enhance their significance. The teacher should make frequent use of peer support groups or networks and schedule times for students to check things out with one another.

**A climate of mutual trust.** Creating such a climate is also difficult because of previous school experience. Teachers are overwhelmingly presented by their institutions as authority figures who have power over students-the power to give grades, fail students, assign work, and criticize. We learn early that people who have power over us do not always use that power fairly or constructively, and so we have a built-in tendency to mistrust authority figures. Teachers should try to minimize this tendency by presenting themselves as caring human beings and describing their role as facilitators or helpers. Teachers should also behave in ways that show they convey trust to the students.

**A climate of active inquiry.** I have a rule of thumb that in the opening session there is never more than 10 minutes of front-end talk before actively involving the participants in building relationships and sharing concerns, as in the exercise described previously. It is important to begin with the understanding that learning is a process of active inquiry, not a process of passive reception of transmitted information.

**A climate of openness.** Some people have a tendency, when put into a learning situation, to play the role of traditional student, which involves showing off, pretending to know things they do not, and being defensive. Learning is enhanced if people feel free to be natural, to act authentically. The teacher can induce such a climate by being an open, natural, and authentic role model.

Another aspect that affects the quality of learning is the organizational climate of the larger social system in which the learning takes place. The notion of an organizational climate involves several sets of ideas. One set has to do with the policy framework undergirding the HRD program. In some organizations, HRD is relegated to the peripheral status in the policy framework, and therefore there is not much reinforcement of motivation to engage in it. Other organizations-especially in the high-tech industries-assign HRD a central role in the achievement of organizational goals and make this explicit in their policy statements.

Another set of ideas regarding organizational climate involves management philosophy. A "Theory X" management philosophy (manager as controller) provides an organizational climate that induces disrespect, competitiveness, threat, defensiveness, and pedagogical strategies. A "Theory Y" management philosophy (manager as facilitator) provides an organizational climate that is more congenial to andragogical strategies.

A third aspect of organizational climate, closely related to the second and possibly a part of it, is the structure of the organization. A number of studies have shown that in hierarchically structured organizations there is less motivation for self-improvement and more blocks to learning (e.g., high anxiety) than in organizations more functionally structured, such as by interlinked work groups or by project task forces or quality circles.

Organizational climate is also affected by financial policies. At the most primary level, the sheer amount of financial resources made available to HRD influences attitudes toward HRD at all levels. When employees see that their organization values HRD highly enough to support it liberally, they are likely to value it as well. If, in times of austerity, HRD is the first budget to be cut, it will come to be seen as a peripheral activity. Perhaps the ultimate sign that an organization has a deep commitment to human resource development is when the HRD budget is handled as an asset (like new machinery), rather than as an operating cost.

Finally, a most crucial determinant of climate is the reward system. All learning theorists would jump on the stimulus-response theorists' bandwagon in acknowledging that those behaviors that are rewarded are likely to be maintained. Accordingly, in those organizations in which participation in the HRD program is given obvious weight in wage and salary increases, promotion, and other job emoluments, the climate will certainly be more conducive to learning than in organizations in which the attitude is that learning should be its own reward.

Climate setting is probably the single most crucial element in the whole process of HRD. If the climate is not really conducive to learning, if it does not convey that an organization considers human beings its most valuable asset and their development its most productive investment, then all the other elements in the process are jeopardized. There is little likelihood of having a first-rate program of human resource development in an environment that is not supportive of learning.

### **Creating a Mechanism for Mutual Planning**

One aspect of learning that most sharply differentiates the pedagogical from the andragogical, the mechanistic from the organismic, and the "teaching" from the "facilitating of learning" schools of thought is the role of the learner in planning. In the first of each of those pairs, responsibility for planning is assigned almost exclusively to an authority figure (teacher, programmer, instructor), but this practice is glaringly in conflict with the adult's need to be self-directing. Therefore, a cardinal principle of andragogy is that a mechanism must be provided to involve all the parties concerned with a learning enterprise—learners, teachers or instructors, line supervisors or managers, clients or customers. Social science research indicates that people tend to feel committed to a decision or activity in direct proportion to their participation in or influence on the making of a decision or the planning of an activity. The reverse of this "law of human nature" is even more relevant to HRD; people tend to feel uncommitted to any decision or activity to the extent that they have not had an opportunity to influence it.

For this reason, the most successful HRD programs almost always have planning committees (or councils or task forces) for every level of activity: one for organization-wide programs, one for each departmental or functional group program, and one for each course, seminar, or workshop. Merely having mechanisms for mutual planning is not enough, however. They must be treated in good faith, with real delegation of responsibility and real influence in decision making, or they can backfire.

### **Diagnosing the Needs for Learning**

There are several levels of depth and objectivity at which learning needs can be assessed. At the lowest level, and often the best one with which to start, is asking the individuals themselves what they want or think they need to learn in order to be more productive and happier in their work. The next level is to ask functional work groups what they think their learning needs are as a group; quality circles are being used increasingly for this purpose. The next level is to obtain data from line supervisors and managers as to what they think the learning needs of their workers are; the management-by-objectives process is being used by a number of corporations and agencies to generate this kind of information. Other sources of organizational data about learning needs include systems analyses, performance analyses, and analyses of such internal documents as safety reports, productivity records, quality control reports, personnel appraisals, and cost/effectiveness studies.

Another approach gaining rapidly in popularity is the use of competency models as a basis for self- or group-diagnosis. Many organizations have created models of the competencies required for performing various roles by having task forces composed of people who are experienced in those roles, pool their thinking about which competencies create superior performance. Individuals assess the gaps between where they are now and where the model says they need to be in

performing the specified competencies. Usually these self-assessments are then checked out with peers and supervisors. Knowles provides detailed descriptions of how this approach works and provides some examples<sup>8,9</sup>.

## Formulating Program Objectives

The Purpose of program Objectives is to provide program planners with some guidelines as to broad goals for which they will be held accountable and to provide consumers (including supervisors and workers) with a basis for selecting those aspects of the program that would be relevant to them. The first purpose is served by statements of the general goals of the whole HRD program that generally appear in personnel manuals and corporate policy pronouncements. The second purpose is served by statements of the objectives of particular units of the HRD program, such as courses, seminars, and workshops that generally appear in the announcements of these activities.

There is somewhat of a battle going on in all of education regarding how the objectives of particular HRD activities should be stated. At one end of the battlefield are the behaviorists, who maintain that an objective must describe a "terminal behavior that can be observed and measured. At the other end are the humanists, who hold that most human learning is too complex to be described by a terminal behavior that can be observed and measured, and that objectives should therefore describe directions of growth in terms of knowledge, skill, attitudes, and values. Both forms of stating objectives are appropriate for different situations. Where the operations being learned are basic skills, such as how to operate a new machine, behavioral objectives probably give the best guidance to the learner. Where the operations being learned are highly complex, such as decision making, critical thinking, better human relations, and gaining self-confidence, more holistic statements of objectives probably give the best guidance to the learner. According to the andragogical model, which places emphasis on learning, the function of objectives is to provide guidance for the learner, as contrasted with the pedagogical model, which places emphasis on teaching, with objectives serving as an instrument of control and evaluation by the teacher."

## Designing and operating a Learning Resource System

Three years ago this section would have been titled "Designing A Comprehensive Program,"<sup>12</sup> and the following section would have been titled "Operating a Comprehensive Program."<sup>13</sup> Until that time HRD was generally conceptualized as only a program of activities—courses, seminars, workshops, institutes, multimedia-packaged programs, and the like. The role of the training staff consisted of managing the logistics of operating this program—performing needs assessment, planning learning sequences, recruiting resource people, drafting budgets, scheduling activities, and promoting the program.

But with the increasing application of systems theory to dealing with organizational affairs in the late 1970s, a new approach to HRD began to emerge. The starting point of this new way of thinking is to conceptualize an organization as a system of learning resources. Once we perceive it as a system of learning resources then we must ask a very different set of questions about the role and operation of HRD than ever asked before.

The first question is "What are *all* of the resources for learning this organization and its environment?" We would usually come up a list that looks something like this:

- All the instructional activities scheduled under the auspices of the HRD department
- All the line supervisors and managers
- All functional work groups
- All daffy experience on the job
- Printed materials, audiovisual aids, and multimedia packages in the library or media center
- Specialists who are using their expertise for work but not as a resource for others' learning
- Community resources - schools, colleges, commercial vendors of learning programs, consultants, and retired persons

Effective techniques for identifying all these resources and storing information about them so it can be retrieved quickly (via a computer, for example) have been developed by the "educational brokering" agencies that are spreading like wildfire across the country.<sup>14</sup>

A second question has to be asked: "How well are these resources being used for learning and how might they be used more effectively?" You probably would arrive at the answer that most of them are not being used very systematically and that they would be used more effectively if the following actions were taken:

1. Substantial blocks of time should be built into the supervisory training and management training development programs exposing the line managers to modern concepts of adult learning and providing them with skill practice exercises on how to serve as facilitators of learning for their subordinates. After all, most current supervisors and managers have had no

instruction in learning and know about it only from how they were taught as children and youth. They do not understand that adults learn differently from the way *they* have been taught.

2. The job descriptions of supervisors and managers should be modified so as to put heavy emphasis on their responsibility to be *people* developers as well as *work managers*. The personnel appraisal system should provide brownie points for the results achieved in developing their personnel through learning.
3. Functional work groups should be given guidelines and tools for assessing not only their productivity but also their learning needs. For example, it has been found in several corporations that quality-circle participants need to improve their competencies in planning and decision making to effective in improving their productivity.
4. Information needs to be disseminated, and frequently updated, about the materials, audiovisual aids, and multimedia packages available in the library and media center and how and when they can be used by employees for personal development as self-directed learners.
5. A process needs to be devised for helping employees make use of these resources for continuous, systematic self-development. The single most potent tool for accomplishing this purpose is the *learning contract*,<sup>15</sup> a device enabling individuals to construct a plan that states learning objectives, identifies appropriate leaning resources for each objective, describes a target date for accomplishing each objective, describes what evidence will be collected to demonstrate the accomplishment of each objective, and indicates how that evidence will be validated.

This approach to HRD has many implications for redefining the nature and role of HRD in an organization. It places the primary responsibility for HRD on the line, and it places a heavy responsibility on the professional HRD personnel to serve as consultants to the line supervisors and managers in carrying out their people-development functions. It shifts the role of the HRD personnel from primarily managers of the logistics instructional activities to managers of a system of learning resources. In effect, their new role is that of systems engineers.

### Evaluating the Outcomes of an HRD System

Of all of the aspects of adult learning, there is not one that causes more of a sense of inadequacy, guilt, and dissatisfaction than evaluation. I know of nobody in our field who is secure and happy with the state of the art in evaluation. There is a simple explanation. We have been living for the last 40 years in a mythical world that has laid a burdensome load of unrealistic expectations on us - the world of quantitative measurement. The assumption that the significant effects of learning can be measured and reported quantitatively is simply not true.

Fortunately, we are at a turning point in our theory and practice of evaluation. We are moving from the "quantitative binge" we have been on for several decades to a new emphasis on *qualitative evaluation*. The central theme of this new approach is that if we really want to find out what the effects of our HRD efforts are, we need to get inside the people involved (learners, supervisors, clients, and public) and find out how they feel and what they are doing about it. This approach requires a completely different set of techniques from the traditional pretests and post-tests of recall and statistical tests of significance of difference. It requires such qualitative techniques as participant observation, in-depth interviews, case studies, personal diaries, analyses of performance changes, and others. The contemporary leaders of qualitative evaluation are Patton<sup>16</sup>, Guba and Lincoln<sup>17</sup>, and Cronbach<sup>18</sup>.

### NOTES

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