Adult Learning Theory

Speck (1996) notes that the following important points of adult learning theory should be considered when professional development activities are designed for educators:

- "Adults will commit to learning when the goals and objectives are considered realistic and important to them. Application in the 'real world' is important and relevant to the adult learner's personal and professional needs.

- Adults want to be the origin of their own learning and will resist learning activities they believe are an attack on their competence. Thus, professional development needs to give participants some control over the what, who, how, why, when, and where of their learning.

- Adult learners need to see that the professional development learning and their day-to-day activities are related and relevant.

- Adult learners need direct, concrete experiences in which they apply the learning in real work.

- Adult learning has ego involved. Professional development must be structured to provide support from peers and to reduce the fear of judgment during learning.

- Adults need to receive feedback on how they are doing and the results of their efforts. Opportunities must be built into professional development activities that allow the learner to practice the learning and receive structured, helpful feedback.

- Adults need to participate in small-group activities during the learning to move them beyond understanding to application, analysis, synthesis, and evaluation. Small-group activities provide an opportunity to share, reflect, and generalize their learning experiences.

- Adult learners come to learning with a wide range of previous experiences, knowledge, self-direction, interests, and competencies. This diversity must be accommodated in the professional development planning.

- Transfer of learning for adults is not automatic and must be facilitated. Coaching and other kinds of follow-up support are needed to help adult learners transfer learning into daily practice so that it is sustained." (pp. 36-37)
Overview of Adult Learning Theory

Learning can be defined formally as the act, process, or experience of gaining knowledge or skills. In contrast, memory can define the capacity of storing, retrieving, and acting on that knowledge. Learning helps us move from novices to experts and allows us to gain new knowledge and abilities.

Learning strengthens the brain by building new pathways and increasing connections that we can rely on when we want to learn more. Definitions that are more complex add words such as comprehension and mastery through experience or study.

Physiologically, learning is the formation of cell assemblies and phase sequences. Children learn by building these assemblies and sequences. Adults spend more time making new arrangements than forming new sequences. Our experience and background allow us to learn new concepts.

At the neurological level, any established knowledge (from experience and background) appears to be made up of exceedingly intricate arrangements of cell materials, electrical charges, and chemical elements. Learning requires energy; re-learning and un-learning requires even more. We must access higher brain functions to generate the much-needed energy and unbind the old.[1]

Our discussion here assumes learning, from the most fundamental to complex, to be (1.) any increase in knowledge, (2.) memorizing information, (3.) acquiring knowledge for practical use, (4.) abstracting meaning from what we do, and (5.) a process that allows us to understand.[2]

Remarkably, people can learn from the moment of birth. Learning can and should be a lifelong process. Learning shouldn’t be defined by what happened early in life, only at school.[3] We constantly make sense of our experiences and consistently search for meaning. In essence, we continue to learn.

Though humans like the familiar and are often uncomfortable with change, the brain searches for and responds to novelty. "Ah-ha!" you may think. "That's why I hated freshman English. No novelty!"

Rote learning frustrates us because the brain resists meaningless stimuli. When we invoke the brain’s natural capacity to integrate information, however, we can assimilate boundless amounts.

Another "Ah-ha"? This may explain why sometimes a tough class, one you never thought you would get through, was one of your all-time favorites.

Western society once believed adults didn’t learn. Even today, if you ask a group why adults cannot learn, it may surprise you how many begin answering the question without challenging the premise. Unfortunately, many adults deny
themselves what should be one of the most enriching parts of life because they assume they can't learn.

We can learn from everything the mind perceives (at any age). Our brains build and strengthen neural pathways no matter where we are, no matter what the subject or the context.

In today's business environment, finding better ways to learn will propel organizations forward. Strong minds fuel strong organizations. We must capitalize on our natural styles and then build systems to satisfy needs. Only through an individual learning process can we re-create our environments and ourselves.

Some of this text was originally published in a whitepaper Marcia wrote in 1995 for Wave Technologies entitled "Learning: The Critical Technology." You can download the full whitepaper in Adobe Acrobat format (280K). The excerpt here is used with permission.

Pedagogy (pèd-e-go´jê) literally means the art and science of educating children and often is used as a synonym for teaching. More accurately, pedagogy embodies teacher-focused education.

In the pedagogic model, teachers assume responsibility for making decisions about what will be learned, how it will be learned, and when it will be learned. Teachers direct learning.

The great teachers of ancient times, from Confucius to Plato, didn't pursue such authoritarian techniques. Major differences exist between what we know of the great teachers' styles, yet they all saw learning as a process of active inquiry, not passive reception. Considering this, it is surprising that teacher-focused learning later came to dominate formal education.

One explanation for the teacher-focused approach goes back to the Calvinists who believed wisdom was evil. They espoused that adults direct, control, and ultimately limit children's learning to keep them innocent.

Another theory maintains that seventh century schools, organized to prepare young boys for the priesthood, found indoctrination an effective approach to instill beliefs, faith, and ritual. Many centuries later, organized schools adopted a similar approach although the outcome was supposed to be neither innocence nor a cloistered life.

John Dewey believed formal schooling was falling short of its potential. Dewey emphasized learning through various activities rather than traditional teacher-focused curriculum. He believed children learned more from guided experience than authoritarian instruction. He ascribed to a learner-focused education philosophy. He held that learning is life not just preparation for life.

Adult education, too, fell victim to teacher-centered models. In 1926, the American Association for Adult Education began and quickly started researching better ways to educate adults. Influenced by Dewey, Eduard C. Lindeman wrote in The Meaning of Adult Education:

Our academic system has grown in reverse order. Subjects and teachers constitute the starting point, [learners] are secondary. In conventional education the [learner] is required to adjust himself to an established curriculum....Too much of learning consists of vicarious substitution of someone else's experience and knowledge. Psychology teaches us that we learn what we do....Experience is the adult learner's living textbook.

Unfortunately, only some of Dewey's and Lindeman's theories seeped into modern classrooms for children or adults. A century after Dewey proposed learner-focused education, most formal education still focuses on the teacher.
As a result, many learners leave school having lost interest in learning. Even good-intentioned educators can squelch naturally inquisitive instincts by controlling the learning environment. By adulthood, some people view learning as a chore and a burden.

In an attempt to formulate a comprehensive adult learning theory, Malcolm Knowles, in 1973, published the book The Adult Learner: A Neglected Species. Building on the earlier work of Lindeman, Knowles asserted that adults require certain conditions to learn. He borrowed the term andragogy (and-rè-go´jê) to define and explain the conditions.

**Andragogy**, initially defined as "the art and science of helping adults learn," has taken on a broader meaning since Knowles' first edition. The term currently defines an alternative to pedagogy and refers to learner-focused education for people of all ages.

The andragogic model asserts that five issues be considered and addressed in formal learning. They include (1) letting learners know why something is important to learn, (2) showing learners how to direct themselves through information, and (3) relating the topic to the learners' experiences. In addition, (4) people will not learn until they are ready and motivated to learn. Often this (5) requires helping them overcome inhibitions, behaviors, and beliefs about learning.

Unfortunately, andragogy usually is cited in education texts as the way adults learn. Knowles himself concedes that four of andragogy's five key assumptions apply equally to adults and children. The sole difference is that children have fewer experiences and pre-established beliefs than adults and thus have less to relate.

In the information age, the implications of a move from teacher-centered to learner-centered education are staggering. Postponing or suppressing this move will slow our ability to learn new technology and gain competitive advantage.

How can we expect to analyze and synthesize so much information if we turn to others to determine what should be learned, how it will be learned, and when it will be learned?

Though our grandchildren or great-grandchildren may be free of pedagogic bias, most adults today are not offered that luxury. To succeed, we must unlearn our teacher-reliance.

We must take it upon ourselves to meet our learning needs and demand training providers do the same. To know our demands, we must know how we process information.

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1. Pedagogy from the Greek word paid, meaning "child," and agogus meaning "leader of."
3. John Dewey tested and proved his theories in the Laboratory School, established at the University of Chicago in 1896.


5. In *The Adult Learner*, Knowles stated that Andragogy is not a new word. It was used in Germany as early as 1833 and has been used extensively during the last decade in Yugoslavia, France and Holland. It is also worth noting that in 1927, Martha Anderson and Eduard Lindeman used the term in a volume titled *Education Through Experience*. 
Adults As Learners

Part of being an effective instructor involves understanding how adults learn best. Compared to children and teens, adults have special needs and requirements as learners. Despite the apparent truth, adult learning is a relatively new area of study. The field of adult learning was pioneered by Malcom Knowles. He identified the following characteristics of adult learners:

- Adults are autonomous and self-directed. They need to be free to direct themselves. Their teachers must actively involve adult participants in the learning process and serve as facilitators for them. Specifically, they must get participants' perspectives about what topics to cover and let them work on projects that reflect their interests. They should allow the participants to assume responsibility for presentations and group leadership. They have to be sure to act as facilitators, guiding participants to their own knowledge rather than supplying them with facts. Finally, they must show participants how the class will help them reach their goals (e.g., via a personal goals sheet).

- Adults have accumulated a foundation of life experiences and knowledge that may include work-related activities, family responsibilities, and previous education. They need to connect learning to this knowledge/experience base. To help them do so, they should draw out participants' experience and knowledge which is relevant to the topic. They must relate theories and concepts to the participants and recognize the value of experience in learning.

- Adults are goal-oriented. Upon enrolling in a course, they usually know what goal they want to attain. They, therefore, appreciate an educational program that is organized and has clearly defined elements. Instructors must show participants how this class will help them attain their goals. This classification of goals and course objectives must be done early in the course.

- Adults are relevancy-oriented. They must see a reason for learning something. Learning has to be applicable to their work or other responsibilities to be of value to them. Therefore, instructors must identify objectives for adult participants before the course begins. This means, also, that theories and concepts must be related to a setting familiar to participants. This need can be fulfilled by letting participants choose projects that reflect their own interests.

- Adults are practical, focusing on the aspects of a lesson most useful to them in their work. They may not be interested in knowledge for its own sake. Instructors must tell participants explicitly how the lesson will be useful to them on the job.

- As do all learners, adults need to be shown respect. Instructors must acknowledge the wealth of experiences that adult participants bring to the classroom. These
adults should be treated as equals in experience and knowledge and allowed to voice their opinions freely in class.

Motivating the Adult Learner

Another aspect of adult learning is motivation. At least six factors serve as sources of motivation for adult learning:

- **Social relationships**: to make new friends, to meet a need for associations and friendships.
- **External expectations**: to comply with instructions from someone else; to fulfill the expectations or recommendations of someone with formal authority.
- **Social welfare**: to improve ability to serve mankind, prepare for service to the community, and improve ability to participate in community work.
- **Personal advancement**: to achieve higher status in a job, secure professional advancement, and stay abreast of competitors.
- **Escape/Stimulation**: to relieve boredom, provide a break in the routine of home or work, and provide a contrast to other exacting details of life.
- **Cognitive interest**: to learn for the sake of learning, seek knowledge for its own sake, and to satisfy an inquiring mind.

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Barriers and Motivation

Unlike children and teenagers, adults have many responsibilities that they must balance against the demands of learning. Because of these responsibilities, adults have barriers against participating in learning. Some of these barriers include lack of time, money, confidence, or interest, lack of information about opportunities to learn, scheduling problems, "red tape," and problems with child care and transportation.
Motivation factors can also be a barrier. What motivates adult learners? Typical motivations include a requirement for competence or licensing, an expected (or realized) promotion, job enrichment, a need to maintain old skills or learn new ones, a need to adapt to job changes, or the need to learn in order to comply with company directives.

The best way to motivate adult learners is simply to enhance their reasons for enrolling and decrease the barriers. Instructors must learn why their students are enrolled (the motivators); they have to discover what is keeping them from learning. Then the instructors must plan their motivating strategies. A successful strategy includes showing adult learners the relationship between training and an expected promotion.

Learning Tips for Effective Instructors

Educators must remember that learning occurs within each individual as a continual process throughout life. People learn at different speeds, so it is natural for them to be anxious or nervous when faced with a learning situation. Positive reinforcement by the instructor can enhance learning, as can proper timing of the instruction.

Learning results from stimulation of the senses. In some people, one sense is used more than others to learn or recall information. Instructors should present materials that stimulates as many senses as possible in order to increase their chances of teaching success.

There are four critical elements of learning that must be addressed to ensure that participants learn. These elements are

1. motivation
2. reinforcement
3. retention
4. transference

Motivation. If the participant does not recognize the need for the information (or has been offended or intimidated), all of the instructor's effort to assist the participant to learn will be in vain. The instructor must establish rapport with participants and prepare them for learning; this provides motivation. Instructors can motivate students via several means:

- Set a feeling or tone for the lesson. Instructors should try to establish a friendly, open atmosphere that shows the participants they will help them learn.
- Set an appropriate level of concern. The level of tension must be adjusted to meet the level of importance of the objective. If the material has a high level of importance, a higher level of tension/stress should be established in the class. However, people learn best under low to moderate stress; if the stress is too high, it becomes a barrier to learning.
- Set an appropriate level of difficulty. The degree of difficulty should be set high enough to challenge participants but not so high that they become frustrated by
information overload. The instruction should predict and reward participation, culminating in success.

In addition, participants need specific knowledge of their learning results (feedback). Feedback must be specific, not general. Participants must also see a reward for learning. The reward does not necessarily have to be monetary; it can be simply a demonstration of benefits to be realized from learning the material. Finally, the participant must be interested in the subject. Interest is directly related to reward. Adults must see the benefit of learning in order to motivate themselves to learn the subject.

**Reinforcement.** Reinforcement is a very necessary part of the teaching/learning process; through it, instructors encourage correct modes of behavior and performance.

- *Positive reinforcement* is normally used by instructors who are teaching participants new skills. As the name implies, positive reinforcement is "good" and reinforces "good" (or positive) behavior.
- *Negative reinforcement* is normally used by instructors teaching a new skill or new information. It is useful in trying to change modes of behavior. The result of negative reinforcement is extinction -- that is, the instructor uses negative reinforcement until the "bad" behavior disappears, or it becomes extinct.

When instructors are trying to change behaviors (old practices), they should apply both positive and negative reinforcement.

Reinforcement should be part of the teaching-learning process to ensure correct behavior. Instructors need to use it on a frequent and regular basis early in the process to help the students retain what they have learned. Then, they should use reinforcement only to maintain consistent, positive behavior.

**Retention.** Students must retain information from classes in order to benefit from the learning. The instructors’ jobs are not finished until they have assisted the learner in retaining the information. In order for participants to retain the information taught, they must see a meaning or purpose for that information. The must also understand and be able to interpret and apply the information. This understanding includes their ability to assign the correct degree of importance to the material.

The amount of retention will be directly affected by the degree of original learning. Simply stated, if the participants did not learn the material well initially, they will not retain it well either.

Retention by the participants is directly affected by their amount of practice during the learning. Instructors should emphasize retention and application. After the students demonstrate correct (desired) performance, they should be urged to practice to maintain the desired performance. Distributed practice is similar in effect to intermittent reinforcement.
Transference. Transfer of learning is the result of training -- it is the ability to use the information taught in the course but in a new setting. As with reinforcement, there are two types of transfer: positive and negative.

- Positive transference, like positive reinforcement, occurs when the participants uses the behavior taught in the course.
- Negative transference, again like negative reinforcement, occurs when the participants do not do what they are told not to do. This results in a positive (desired) outcome.

Transference is most likely to occur in the following situations:

- **Association** -- participants can associate the new information with something that they already know.
- **Similarity** -- the information is similar to material that participants already know; that is, it revisits a logical framework or pattern.
- **Degree of original learning** -- participant's degree of original learning was high.
- **Critical attribute element** -- the information learned contains elements that are extremely beneficial (critical) on the job.

Although adult learning is relatively new as field of study, it is just as substantial as traditional education and carries and potential for greater success. Of course, the heightened success requires a greater responsibility on the part of the teacher. Additionally, the learners come to the course with precisely defined expectations. Unfortunately, there are barriers to their learning. The best motivators for adult learners are interest and selfish benefit. If they can be shown that the course benefits them pragmatically, they will perform better, and the benefits will be longer lasting.