

# **Applying the Adult Learning Model to Online Learning**

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## ***Learning Models and Instructional Design***

Instructional designs are usually based on an explicit learning model. The most widespread model in use today is traditional pedagogy, which usually involves a one-to-many approach to learning. The one (mentor, teacher, professor, expert) stands before the many (students, audience) and imparts wisdom and knowledge. The teacher's role is to know what the students should learn and to provide the information to them in an organized fashion. The role of student is to receive this information passively and then demonstrate, through a testing process, that the information has been "learned." The teacher then "grades" the students ability to perform this demonstration.

Alternative to traditional pedagogy are several models that focus on adults as learners. Research into how adults best learn began early in this century. In the 1960s, investigations into the application of humanistic psychology to education and the work place revealed the relationship between self-actualization and learning and the inhibiting effect that several features of traditional pedagogy have on learning itself.

This research tended to be culturally centric (white, middle class, American) and thick with speculations about learning that more recent findings do not support. Nonetheless it has much to offer us today as we create learning environments in which diverse individuals learn, in a wide variety of ways, using highly variable learning styles and tools.

The ideal application of humanistic psychology principles to learning would likely create a radically different learning environment from what we generally see today. A truly humanistic learning environment would probably provide facilitation, experts, resources, and materials to all the learners in a given group; help them to think through what they want to learn and how they want to learn it; and engender few value judgments about the nature or quality of the individual learning experience, while more readily accommodating self-evaluation.

## **Andragogy versus Pedagogy**

Many of the findings from the early research have been integrated into an adult learning model known as *andragogy*. Although the word "andragogy" was in use as early as 1833, Malcolm Knowles [1] is generally credited with popularizing concept in the United States in the 1970s. Knowles defined andragogy as "the art and science of helping adults learn," which he contrasted with the use of "pedagogy," which he says was originally concerned with helping children learn (as testified to by the etymology of the word). Over time, the use of the word pedagogy became so entwined with instructional design in general that the two have become virtually synonymous. In fact, today most people mean instructional design as a whole when they use the word "pedagogy."

According to Knowles, andragogy rests on four crucial assumptions about adult learners and how they differ from child learners. Andragogy assumes that, as people mature (1) their self-concept moves from dependence to self direction, (2) their growing reservoir of experience

begins to serve as a resource for learning, (3) their readiness to learn becomes oriented increasingly toward the developmental tasks of their social roles, and (4) they begin to want to apply what they have learned right away to life's real challenges. Accordingly, their orientation toward learning shifts from one of subject centeredness to one of problem centeredness.

The tables in the appendix, "Adult Learning: A Different Pedagogy," summarize the basic differences between traditional pedagogy and andragogy.

## **Distance Learning**

Most distance learning designs use the traditional pedagogical model of one-to-many teaching. The technologies that work best with this model are television broadcast and/or video tapes, radio broadcast and/or audio tapes, and paper correspondence. In each of these cases, the expert/teacher usually stands before a camera and/or microphone or is encapsulated in a recording or on paper. Students still play a passive learning role and submit to a traditional graded test kind of evaluation.

The various delivery methods have different advantages and disadvantages. Tapes and paper correspondence allow participants to do their learning from any location and at any time; however, the participants are isolated from one another and from their teacher. Live broadcast adds the element of interaction, but forces the participants to tune in all at the same time, an option with limited appeal to groups dispersed across time zones.

The Mind Extension University successfully combines video broadcast, video tapes, and correspondence materials to provide a wide variety of college level courses.

Although broadcasting is expensive, some organizations choose it because so many participants have access to television and radio.

For interaction, participants must come together in a special classroom equipped to send and receive broadcast signals. Because of the expense involved, this live broadcast method has seen only limited use. It is nonetheless a viable option for groups that can readily gather at the same time. Evidence shows that most participants and teachers adapt remarkably well to interacting with a video screen or speaker phone.

UOL Publishing (formerly The University Online) has recently begun to offer computer-mediated courses over the Internet that incorporate some multi-media features, such as video and audio clips and graphic images.

## **Computer-Mediated Learning**

One more option for distance learning is the personal computer. Computer-mediated learning that utilizes the traditional pedagogical design is usually referred to as *CBT* or *computer-based training*. CBT designs that are delivered over the World Wide Web are usually referred to as *Web-based training* or *WBT*.

## Online Learning

Although computer-mediated learning designs such as CBT and WBT are entirely suited to the delivery of training in certain skills or procedures, this is not their most promising role. What is far more exciting is their potential for delivering interactive, facilitated learning at any time and in any place. This is usually referred to as *online learning*. Usually text and data based, online learning can also include multi-media technology that allows participants to view live or recorded video or audio clips. Like interactive audio/video broadcast, multi-media technology is still relatively expensive and crude and is therefore not yet widely in use.

Online learning that is strictly text-based has been around since the 1970s, when the National Science Foundation funded the *Electronic Information Exchange System* experiments that began at the New Jersey Institute of Technology. [2] Over time, text-based online learning has proven to be the most cost-effective of all the technology-mediated options.

The University of Phoenix has offered Bachelors and Masters degrees delivered by text-based conferencing for nearly a decade.

Text-based online learning uses a special form of email known as conferencing. Whereas regular email stores messages in the order received, conferencing stores them together by topic into what are called "threads." This makes it far easier to track ongoing conversations among more than two people.

In online learning, participants join a conference by logging onto a host computer with their personal computer. This can be done over a "local area" network, such as a corporate Intranet, or over a "wide-area" network, such as a restricted company network or the public Internet. Once you have logged on to the host computer, you can see which topics are available for discussion and you can either start a topic of your own or join an existing one. In most online learning environments, the topics have been predefined and correspond to the courses you are taking.

The Electronic University Network, on AOL, coordinates courses from several colleges that offer traditional one-to-many learning online.

Although online learning environments can be utilized in the same one-to-many way as audio/video and correspondence courses, they have the added advantage of supporting interaction among participants without the enormous expense of broadcasting. The facilitator can post lectures to the conference and the participants can attend them by logging on. And, using conferencing software, participants can not only ask questions of the facilitator but also engage one another in lively, in-depth conversations about the course topics.

## **FutureU's Online Learning Model**

There is more to online learning than simply using computer-mediated communications tools to move 200 year old instructional design onto the Internet. The most successful online learning designs incorporate the unique learning requirements of adults. At **FutureU** our experience with adult learning online has taught us to pay close attention to the following principles of adult learning:

1. Working adults, whether employed or self-employed, are a highly diverse group with different preferences, needs, backgrounds, and skills.
2. People rely heavily on their own experience as a major resource in any learning situation.
3. Adults learn best when they can reflect, analyze, discuss, collaborate to solve problems, and apply what they are learning to real-world situations.
4. Most adults can learn to stop depending on instructors and external motivators and start depending on themselves and their own motivation to learn, centered on the skills of self-directed learning and the creation of explicit learning plans.
5. Effective learning environments support the learner in defining individual needs both in terms of immediate needs and in terms of identifying the underlying assumptions or mental models that influence and shape personal needs.
6. Successful learning programs help learners to assume increasing personal responsibility for defining their learning objectives, planning their own learning programs, and mastering the art of self-evaluation and do this while simultaneously meeting their individual work requirements and personal growth needs.
7. Effective training helps learners understand how to use the experiences of others as learning resources, how to engage others in reciprocal learning relations, and how to integrate the perspectives of others with alternative ways of understanding into current learning.
8. People learn best when they take part in purposeful groups, such as work teams, organizations, and communities. When newcomers join the group, effective participation keeps what is known alive, creating what could be called a "group practice."
9. People change their patterns of participation as the group accomplishes its purpose across time creating "group learning."
10. A learning team, learning organization, or learning community is a work team, organization, or community with loose boundaries but a clear mission immersed in an environment that fosters the learning of group practices and creates performance and member satisfaction that is superior to groups with strict boundaries and rules and unclear missions.

## Appendix: Adult Learning-A Different Pedagogy

<b>Espoused Beliefs (Mental Models)</b>		
<b>Topic</b>	<b>Traditional Pedagogy</b>	<b>Adult Learning</b>
<b>View of Human Nature</b> (see last table in this series for definition of Theories X & Y)	Theory X	Theory Y
<b>Perception of Nature of Work</b>	Necessary evil	Vehicle for self-expression
<b>Organization Design</b>	Bureaucracy	Reduced hierarchy, team-based high performance
<b>Organization Goals</b>	Stable, slow-changing, highly structured performance	Dynamic, fast-changing, continuous improvement
<b>Organization Climate</b>	Authority-oriented Formal/closed Competitive	Respect-oriented Informal/open Collaborative
<b>Diagnosis of Needs</b>	Supervisor	Mutual/self-diagnosis
<b>Purpose of Intervention</b>	Orientation, Standardization, Instruction (acquisition of existing knowledge)	Change, Development, Creation of new knowledge
<b>Employee Competence</b>	Below minimum acceptable performance	Above minimum acceptable performance

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<b>Underlying Assumptions</b>		
<b>Topic</b>	<b>Traditional Pedagogy</b>	<b>Adult Learning</b>
<b>Learners/employees</b>	Dependent	Independent
<b>Subject matter</b>	One right way	Many ways
<b>Motivation to learn, change, or improve</b>	External, dictated by others	Internal, response to personal/career needs
<b>Role of experience</b>	Unimportant or even discounted	A rich resource that can be the basis for learning, change or improvement  Must be integrated
<b>Learner/employee self-concept</b>	Need outside direction	Capable of self-direction
<b>Learning orientation</b>	Subject-centered Logic-oriented	Life/career-centered Process centered
<b>Objective</b>	Minimum requirements	Self-betterment

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<b>Consequent Learning Design</b>		
<b>Topic</b>	<b>Traditional Pedagogy</b>	<b>Adult Learning</b>
<b>Identification of Need</b>	Mandate from above	Choice of learning motivated by life enhancement or performance improvement expectation
<b>Instructional Design</b>	Transmission of prescribed subject matter through lectures, Socratic dialogue, and memorization	Subject matter is life-centered, task-centered, problem centered and learning is facilitated, self-reflective and transformative
<b>Learning Process</b>	<p>Passive learning</p> <p>Instruction, memorization, modeling, demonstration, coaching, etc.</p>	<p>Active Learning</p> <p>Critical and reflective thinking, shared visioning.</p> <p>Simulations through team learning, case studies, role playing, etc.</p> <p>On the job experience, new information, interpretation, practice, adaptation, and integration.</p> <p>Experiential learning such as creative thinking, improvisation, ropes courses, etc.</p>

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<b>MacGregor's 1960 Explication of Theories X and Y [4]</b>	
<b>The Assumptions of Theory X</b>	<b>The Assumptions of Theory Y</b>
1. The average human being has an inherent dislike of work and will avoid it if he can.	1. The expenditure of physical and mental effort in work is as natural as play or rest.
2. Because of this human dislike of work, most people must be coerced, controlled, directed, and threatened with punishment to get them to put forth adequate effort toward the achievement of organizational objectives.	2. Men and women will exercise self-direction and self-control in the service of objectives to which they are committed. 3. Commitment to objectives is a function of rewards associated with their achievement.
3. The average human being prefers to be directed, wishes to avoid responsibility, has relatively little ambition, wants security above all.	4. The average human being learns, under proper conditions, not only to accept but to seek responsibility. 5. The capacity to exercise a relatively high degree of imagination, ingenuity, and creativity in the solution of organizational problems is widely, not narrowly, distributed in the population. 6. Under conditions of modern industrial life, the intellectual potentialities of the average human being are only partially utilized.

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## References:

[1] Knowles, Malcolm. *The Modern Practice of Adult Education: Andragogy versus Pedagogy*. New York: Association Press, 1970.

[2] Hiltz, S.R. and Turoff, M. *The Network Nation: Human Communication via Computer*, Addison-Wesley, 1978. Revised edition published by MIT press, 1993.

[3] Based in part on the following:

Cross, K. Patricia. *Adults as Learners: Increasing Participation and Facilitating Learning* (San Francisco: Jossey-Bass, 1981).

Knowles, Malcolm S. *The Modern Practice of Adult Education: Andragogy Versus Pedagogy* (New York: Association Press, 1970).

[4] McGregor, Douglas. *The Human Side of Enterprise* (New York: McGraw-Hill, 1960).

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