Andragogy and Technology: Integrating Adult Learning Theory As We Teach With Technology

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Abstract

Introducing technology into the curriculum means more than just "making it work." The principles of adult learning theory can be used in the design of technology-based instruction to make it more effective. Malcolm Knowles' theory of andragogy allows teacher/facilitators to structure lessons which are part of a relevant learning environment for adult students.

http://frank.mtsu.edu/~itconf/proceed00/fidishun.htm

Introduction

Higher education has given priority to the integration of technology into the curriculum. As this has occurred, institutions are faced with the many issues that surround making the lessons succeed technologically. Faculty must spend time learning how to use the technology and ensuring that adequate institutional support is present to make the technology work. It is, therefore, easy for the instructional design of such curricula to be put on the side while we get technology issues "under control." Faculty need to focus on learning theory in the design of instructional technology so that they can create lessons that are not only technology-effective but that are meaningful from the learner's standpoint. Malcolm Knowles' theory of andragogy outlines effective methodologies for adult learning. When this theory is integrated into the design of technology-based learning environments it is possible to create lessons that not only serve the needs of students to use the latest technology but also focus on their requirements as an adult. Andragogy includes ideas such as an adult's readiness to learn, the role of the learner's experiences, the faculty member as a facilitator of learning, an adult's orientation to learning, and the learner's self concept.

What is Andragogy?

Andragogy is a set of assumptions about how adults learn. Its roots can be traced back to Alexander Kapp, a German grammar teacher who used it to describe Plato's educational theory (Knowles, Holton, and Swanson 1998, 59). It appeared again in 1921 when another German, Social Scientist, Eugen Rosenstock claimed that "adult education required special teachers, special methods, and a special philosophy." (Knowles, Holton, and Swanson 1998, 59) There is evidence that discussion of andragogy continued in Europe until Dusan Savicevic, a Yugoslavian adult educator, first discussed the concept in the United States. Malcolm Knowles heard about the term and in 1968 used it in an article in Adult Leadership. From that point on, Knowles has become known as the principle expert on andragogy although numerous adult educators including Brookfield (1986), Mezirow (1991), Lawler (1991) and Merriam (1999) have addressed the concept and/or discussed how it can be used to facilitate adult learning.

Technology and the Assumptions of Andragogy

Knowles, Holton and Swanson (1998) discuss six assumptions of andragogy. Following are expanded definitions of those assumptions with their implications for technology-based instruction:

- The Learner's Need to Know

Adults need to know why they should learn something. Under the more standard pedagogical model it is assumed that the student will simply learn what they are told. Adults, however, are used to understanding what they do in life. They want to know the reason they need to learn something or how it will benefit them. This may be accomplished before students even engage technology, such as if a Spanish class is required to fill a language elective to complete a degree, however, it is wise for the faculty member to help students understand how what they will learn will be of use to them in the future. The required Spanish language lessons will be more affective if the student feels that it will increase her/his ability to understand a bilingual colleague on the job.

One way to help students see the value of the lessons is to ask the student, either online or in an initial face-to-face meeting, to do some reflection on what they expect to learn, how they might use it in the future or how it will help them to meet their goals. Patricia Lawler (1991, 36) suggests that these goals and expectations can be used throughout the program to reinforce the importance of learning activities. The design of technology-based lessons can incorporate not only the students' original reflections but can solicit feedback about the relevance of the ongoing learning process throughout the course. It is incumbent upon the instructor to review these reflections and to adjust the technology or suggest an individual lesson structure to more effectively meet student needs.

- The Learner's Self-concept

Knowles, Holton, and Swanson emphasize that "adults resent and resist situations in which they feel others are imposing their wills on them." (1998, 65) In spite of their need for autonomy, previous schooling has made them dependent learners. It is the job of the adult educator to move adult students away from their old habits and into new patterns of learning where they become self-directed, taking responsibility for their own learning and the direction it takes. Technology is a perfect path for the facilitation of self-direction. The ultimate ability of initiatives such as web-based learning to be non-linear allows an adult to follow the path that most appropriately reflects their need to learn. It becomes extremely important for those who are designing technology-based adult learning to use all of the capabilities of the technology including branching, the ability to skip sections a student already understands, and multiple forms of presentation of material which can assist people with various learning styles. All of these can be used to permit students to follow a path of learning that most appropriately suits them.

There is, however, one final piece that needs to be added when students are learning with technology. There must be some way to help learners who are still moving into the self-directed mode. Those learners who are new to adult education or who for some reason have not experienced the ability to be self-directed learners in the past need a structure which will help them to grow. Particular attention should be given to students who may not want to spend time outside of a classroom situation; who prefer to be spoon-fed material during a regularly scheduled session. This type of student may exhibit negative opinions of having to use technology as the only means of learning as they will need to take responsibility and direct their own learning. The instructor must find ways to move these learners into self-direction by giving them short, directed, concrete online tasks that provide the most "learning for the experience" to make these adults see the relevancy of online learning.

It is also important that self-directedness not be confused with self-motivation. Although a student may be motivated to take a course, they may not be self-directed enough to feel comfortable choosing instructional modules in an online course or creating their own structured environment to learn in a web-based course.

Encouraging self-directedness may also take the form of additional instructor contact in the beginning stages of the class or could be facilitated by having students do technology-based modules within a traditional class before they move to a complete course based in technology.

- The Role of the Learner's Experience

Adults have had a lifetime of experiences. These make adult learners more heterogeneous than younger learners and also provides an additional base of knowledge that can and should be used in the classroom or technology-based learning experience. Adults want to use what they know and want to be acknowledged for having that knowledge. The design of technology-based instruction must include opportunities for learners to use their knowledge and experience. Case studies, reflective activities, group projects that call upon the expertise of group members and lab experiments are examples of the type of learning activities which will facilitate the use of learners' already acquired expertise.

An important corollary to the experience that adults bring with them is the association of their experiences with who they are. Their self-identity including habits and biases are determined from their experience. It is for this reason that those developing technology-based instruction for adult learners need to create opportunities for what Jack Mezirow calls "reflective learning." (1991, 6) As Mezirow states, "reflective learning involves assessment or reassessment of assumptions" (1991, 6) and "reflective learning becomes transformative whenever assumptions or premises are found to be distorting, inauthentic or otherwise invalid." (1991, 6) Reflective learning activities can assist students in examining their biases and habits and move them toward a new understanding of information presented. Using web-based or other technologies to have students reflect on learning activities or to put themselves in a different character in a case study or scenario may cause adults to reevaluate already learned information or patterns.

- A Student's Readiness to Learn

Adults become ready to learn something when, as Knowles explained, "they experience a need to learn it in order to cope more satisfyingly with real-life tasks or problems." (1980, 44) It is important that lessons developed in technology-based opportunities should, where possible, be concrete and relate to students' needs and future goals. These may be adapted from the goals of the course or learning program but can also grow out to the requests for student expectations that were mentioned earlier. In addition, an instructor can encourage students' readiness by designing experiences which simulate situations where the student will encounter a need for the knowledge or skill presented. Students in a personnel management course may not see the need for learning about the Family and Medical Leave Act but an interactive role play that puts students in the place of a manager who must deal with an employee's request for leave due to a child's illness will help them see how an understanding of the topic will benefit them in the future.

- The Student's Orientation to Learning

Adults are life, task or problem-centered in their orientation to learning. They want to see how what they are learning will apply to their life, a task they need to perform, or to solving a problem. Technology-based instruction will be more effective if it uses real-life examples or situations that adult learners may encounter in their life or on the job. Allowing flexibility in the design of a lesson will permit student input on issues that need to be addressed in a class. If students can bring real-life examples of school discipline challenges to a chat session in an online course on behavior management they will be anxious to participate and gain the practical experience which will help them to do better at their job.

- Students' Motivation to Learn

While adult learners may respond to external motivators, internal priorities are more important. Incentives such as increased job satisfaction, self-esteem and quality of life are important in giving adults a reason to learn. If any of these can be related as part of technology-based instruction adults will respond more positively. Activities that build students' self-esteem, or sense of accomplishment through, for example, the completion of goals or modules that can be checked off in a sequence, may help motivate completion of a longer lesson. In addition, student's input into the development of lessons or in the prioritization of topics covered can help students to take ownership of the learning process.

Conclusion

To facilitate the use of andragogy while teaching with technology we must use technology to its fullest. Arguments for the use of technology many times include statements about its flexibility and the ability of the learner to move through lessons any time, anywhere, and at their own pace. These arguments also include logical explanations of how a learner may adapt the lessons or material to cover what they need to learn and eliminate the material that is not appropriate or that they have already learned. To adapt to the needs of adult students, these definitions of technology-based learning must be utilized to make its design interactive, learner-centered and to facilitate self-direction in learners.

Educators who are using adult education concepts in the development of their lessons must also become facilitators of learning. They must structure student input into their design and create technology-based lessons which can easily be adapted to make the presentation of topics relevant to those they teach.

If these guidelines are followed, the instruction that is developed will be not only technologically workable but also effective from a learner's perspective.

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