### Andragogy and Technology

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#### INTRODUCTION

More than 30 years ago, Malcolm Knowles defined andragogy as the art and science of helping adults learn. The essence of this principle is based on the premise that adults learn differently than children. Knowles' andragogical studies were significant. One reason for this was that pedagogy, the art and science of educating children, had been well researched, but educating adults had not been as thoroughly studied.

Today, Knowles' definition and andragogical principles are still applicable, but andragogy is continually refined through the expansion of its basic theory. This article proposes that andragogy be viewed from two additional perspectives: cultural and technological.

From a cultural perspective, because individuals are unique, so are their learning experiences. According to Brooks (1986), andragogy regards adults as social beings who are products of history and culture. Although many of the adult learner characteristics apply to the majority of adults, learning is influenced by cultural norms and values. Each culture learns using different methods and demonstrates what they have learned in different manners.

For example, in China, rote memorization is the main teaching method to prepare K-16 students for a series of national examinations. Learning is identified via test results. In contrast, American K-16 students are encouraged to learn and to reflect about the relevance of a topic with their daily lives and tested via essays, even in math or science. Therefore, the methods which students use as they process information and assessment vary culturally.

The second way andragogical study can expand is through the inclusion of today's accessible technology. With more technology available, adult learners help themselves more readily. Innovations such as online schools, chat rooms, instant messenger (IM), MP3 players, and Web cameras aid adult learners who typically juggle work, family, and school. Adult learners more easily continue their education, especially if they were once limited geographically and now participate in online classes.

As the debates and discussions continue, one thing becomes clear: the learning needs of adult learners are indeed different than those of a child. As time goes on, andragogical theory will be continually refined. One may hope that its study becomes more holistic, taking into account the nuances of an adult learner's culture and how technology fosters increased educational opportunities.

#### BACKGROUND

In 1833, German teacher Alexander Kapp coined andragogy. The word itself is derived from the Greek word aner, meaning man. Thus andragogy is defined as the art and science of helping adults learn. Andragogy fell into disuse and then was reintroduced in a report by Rosenstock in 1921. Malcolm Knowles applied the term to his concept of adult education in the 1970's.

Malcolm Knowles, in his seminal work, "The Adult Learner: A Neglected Species" (1973), maintains there are four basic assumptions of andragogy that differ from pedagogy, yet Knowles continued to consider his seminal work. "And, ever evolving his own ideas and learning from others, he continued to modify his andragogical assumptions" (Lee, 1998). With regards to children and andragogy, Knowles shared, "... andragogy is simply another model of assumptions about adult learners to be used alongside the pedagogical model of assumptions, thereby providing two alternative models for testing out the assumptions as to their fit with particular situations. Furthermore, the models are probably most useful when seen not as dichotomous but rather as two ends of a spectrum, with a realistic assumption (about learners) in a given situation falling in between the two ends (Knowles, 1980, p. 43).

- 1. Their self-concept moves from dependency to independency or self-directedness.
- They accumulate a reservoir of experiences that can be used as a basis on which to build learning.

- 3. Their readiness to learn becomes increasingly associated with the developmental tasks of social roles.
- 4. Their time and curricular perspectives change from postponed to immediacy of application and from subject-centeredness to performance-centeredness (Knowles, 1980, pp. 44-45).
- 5. Motivation to learn: "As a person matures the motivation to learn is internal" (Knowles, 1984, p. 12).

Over the years, there have been discussions and debates about Knowles' definition and andragogical theories as a system of ideas, concepts, and approaches to adult learning. For example, Cross (1981) felt there are four questions to answer regarding Knowles' concept. Within this framework, Cross provides a new approach, differentiated instruction, to provide programming for individuals based in their differences of personal and situational characteristics.

- 1. Adult learning programs should capitalize on the experience of participants.
- 2. Adult learning programs should adapt to the aging limitations of the participants.
- 3. Adults should be challenged to move to increasingly advanced stages of personal development.
- 4. Adults should have as much choice as possible in the availability and organization of learning programs.

It is from the perspective provided by Cross (1981) that we consider how these questions and the main tenants of andragogy fare when considering cultural differences and the impact of technology upon the learner. While andragogy includes behaviorist, cognitive, psychological, and humanist approaches, it is always with respect to the adult learner as a proactive and responsible person, focusing on the students as "mature" human beings.

### ANDRAGOGY VS. PEDAGOGY

For a full look at andragogical study, it is important to understand the innate differences between the mature adult leaner and the way a child learns.

Pedagogy, or teacher-directed instruction as it is commonly known, places the student in a submissive role requiring obedience to the teacher's instructions. It is based on the assumption that learners need to know only what the teacher teaches them. The result is a teaching and learning situation that actively promotes dependency on the instructor. (Hiemstra & Sisco, 1990).

As the recipient of knowledge deemed appropriate by the teacher, students are expected to learn. As noted by Lee (1998),

Children have a subject-centered orientation to learning; adults tend to have a problem centered orientation. That is, children master content to pass a course or be promoted to the next grade; adults seek the skills or knowledge they need to apply to real-life problems they face.

The origins of didactic teaching method are found in the "monastic schools of Europe in the Middle Ages. Young boys were received into the monasteries and taught by monks according to a system of instruction that required these children to be obedient, faithful, and efficient servants of the church (Knowles, 1984). From the monasteries of Europe the belief of pedagogy was established and eventually "spread to the secular schools of Europe and America and became and remains the dominant form of instruction" (Hiemstra & Sisco, 1990). Interestingly, known for his work regarding adults, Knowles' thoughts regarding children and their learning are worth further consideration today as educators are able to use technology to aid the whole individual in need of educational opportunities appropriate for each. Knowles presents sound educational input regarding children. "Kids have just as much need for learning to be life-centered, task-centered and problem-centered. It's just that the nature of their tasks, problems and lives is different," Knowles told TRAINING "The only universal characteristic of adult learners is the quality and quantity of their experience...." (Lee 1998).

Almost by definition, the adult learner is one who returns to study, on a full-time or part-time basis after a period of time spent in other pursuits. As a result, each student brings a rich background culled from life and work experiences, which include roles as an employee, spouse, parent, citizen, and community or church worker. These insights make it easier for adults to recognize how ideas are transformed into action and how theory can be transformed into practice outside the classroom.

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