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Reflective Practices in Technology-Based Deliveries for Non-Traditional Students

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Abstract

Adult students seem to have a different learning style requiring a careful approach when using modern technology. They have an expectation for immediate response and effect. The use of learning-at-distance models in higher education, due to the fact that work schedules may interfere with attendance in the traditional manner, could be a major factor in motivating an adult student to return to school. However, traditional pedagogies may not be effective with this adult population. In fact, andragogy or "adult learning," as a means of educational delivery may be a necessity rather than an optional approach with online instruction. Because online educational technology in higher education is relatively new, research is needed to find the right method and mix of introducing theoretical pedagogies and reflective/experience-based andragogies.

Exploring the Need for Developing Adult Learning Models When Using Technology

Introduction

Adult students seem to have a different learning style requiring a careful approach when using modern technology. They have an expectation for immediate response and effect.

"Adults need to know why they should learn something. Under the standard pedagogical model it is simply 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 will need to learn something or how it will benefit them" (Fidishun, n.d., p.2).

Also, most of the students from this group are older (the nontraditional student profile) and are used to being self-directed (Gibbons & Wentworth, 2001). Enticing adults to return to school and retaining these students may be challenging.

For the action-oriented, adult student, online delivery of information, which does not include a way of integrating life experience into the model, is not accepted well. Adults usually bring a plethora of real-life experiences with them to the classroom, experiences that need to be recognized and integrated into the learning process (Knowles, 1984). Key points of adult learning include consideration of the learner's experiences, the importance of the learning environment, the learner's readiness to learn, and the teacher as a facilitator (Brown, 2001). Kolb (1984) proposed a four stage cycle: 1) concrete experience; 2) reflective observation; 3) abstract conceptualization (theory building) and, 4) active experimentation or application.

Thomas and Merrill (2001) note a concern for the human or social dimension of online learning environments. They addressed the fact that much is often discussed about the technical components of distance education, but less often discussed is the human or social dimension of these environments. They found that online instruction might foster a reflective and social environment. (Merrill, Disilvestro, & Young, 2003). A need exists to find a way to transform experience(s) into learning.

Based upon this theory, some evolving questions are:

1. How do adult learners experience online learning?

2. What are the strengths of online learning for the adult student?

3. What are the weaknesses of online learning for the adult student?

Non-traditional Adult Learning

The use of learning-at-distance models in higher education could be a major factor in motivating an adult student to return to school. However, traditional pedagogies may not be effective with this adult population. In fact, andragogy or "adult learning," as a means of educational delivery may be a necessity rather than an optional approach. Current learning theories and models have failed to inform or influence most instructional practice, especially that of distance and e-learning (Barclay, 2001). Finding a good method of allowing them to immediately apply knowledge, while still being able to take responsibility for their own learning could help create an appealing and effective delivery model. The adult student needs to be moved "away from their old habits and into new patterns of learning where they become self-directed, take responsibility for their own learning, and the direction it takes" (Fidishun, n.d., p3).

According to Malcom Knowles (1973), considered by many as the leading

authority on adult education, the term "andragogy" was first coined by Alexander Kapp,

a German grammar teacher, in 1833. This concept had been evolving throughout Europe

for some time and was based on the teaching philosophy of Plato. Knowles further

presents that Ger van Enckvort, a Dutch adult educator, espoused, "[A]dult education

required special teachers, special methods, and a special philosophy" (Knowles, 1973, p.

49).

> "A relatively new adult educational theory is "going under the label
>
> 'andragogy,' derived from the stem of the Greek work 'aner,' meaning
>
> man (as distinguished from boy). This 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 (in 1970 the University of
>
> Amsterdam established a 'Department of Pedagogical and Andragogical
>
> Sciences'). But the theory and technology it is coming to identify are new"
>
> (Knowles 1973, p. 54).

Malcolm Knowles (1970) hypothesizes four main assumptions about andragogy

differentiating it from pedagogy:

1. Changes in self-concept—the assumption that as a person grows and matures

   his self-concept moves from one of total dependency to one of increasing self-

   directedness

2. The role of experience—the assumption that as an individual matures he

   accumulates an expanding reservoir of experience that causes him to become

an increasingly rich resource for learning, and a broad base to which to relate new learning.

3. Readiness to learn—the assumption that as an individual matures, his readiness to learn is decreasingly the product of his biological development and academic pressure and is increasingly the product of the tasks required for his evolving social roles.

4. Orientation to learning—the assumption that children have been conditioned to have a subject-centered orientation to learning, while adults tend to have a problem-centered orientation to learning.

More recent theories about adult learning are based on the assumption that the adult learner is self-directed, organizing educational opportunities outside of formal setting. Optimal learning takes place when educational models "include the learner's experiences, the importance of the learning environment, the learner's readiness to learn, and the teacher as a facilitator" (Brown, 2001).

Transforming experience into learning is critical to adult education. Designers and facilitators of learning must move away from context heavy classes, guiding the learner in an environment supportive of learning and development. Learning from experience requires both reflection and reflexivity (Brown, 2001). However, it is clear that andragogy and Malcolm Knowles have brought considerable attention to adult education as a separate field during the past three decades. Applied correctly, the andragogical approach to teaching and learning in the hands of a skilled facilitator can make a positive impact on the adult learner (Hiemstra & Sisco, 1990).

By employing a self-directed, independent approach to learning, students gain far more knowledge and experience than expected. The opportunity to learn independently removes the artificial boundaries that define the prescribed amount of learning that should occur. Students are very motivated and frequently go beyond required assignments (Ellis, 2002).

One problem that may have surfaced with the introduction of technology is that developers have concentrated more on the medium itself and less upon the content and methodology of their instruction. The danger in the rapid introduction of electronic delivery is that the focus may be on the delivery mechanism, rather than on the quality of the learning experience (O'Keefe & McGrath, 2000). Research has generally focused on technological aspects, with relatively few academic studies or articles written on the human and social aspects of teaching and learning-at-distance. Recent research indicates that quality of learning depends on the design of instruction and that learning transfer and retention are most strongly impacted by the frequency and quality of learner-centered practice activities. Therefore, the instructional design process has the biggest effect on final course/program quality – not the use of technology itself (Barclay, 2001).

Not much information is available regarding the affective characteristics of the use of the Internet and other media for distance education. Barclay (2001) states in her work that a limited amount of research has been performed on the more affective aspects of distance education. Barclay (2001) also suggests that research is needed to better understand human social learning issues associated with technology as well as specific skills, practices, and attitudes synchronous online instructors need to be successful.

Distance education, for the most part, has been assumed to be for the nontraditional student (defined as over age 25). "However, Knowles (1980) defined adulthood as 'the point at which individuals perceive themselves to be essentially self-directing' (p. 46). Self-directedness is not necessarily correlated with age" (Gibbons & Wentworth, 2001). Since the nontraditional student is the typical user of distance or online educational media it seems reasonable that instructors/designers develop learning models consistent with andragogy. "The nature of the online learner suggests that online instructor training be based on andragogical theory" (Gibbons & Wentworth, 2001).

One effective way of incorporating andragogical theory into online education is by use of reflective and/or reflexive projects. "Duchastel favors online instruction that centers on tasks to be accomplished by utilizing the acquired knowledge rather than simple repetition of knowledge received from the instructor. Just as cognitive educators desire active engagement by students with material, Duchastel believes Web instruction should 'request production of knowledge' such as by open-ended question that challenge learners to think about the information and use the information to create new knowledge. The instructor would then evaluate the application of that knowledge to a task, not just the ability of learners to repeat the information" (Dewald, 1999).

British educator/researcher, Peter Jarvis, developed a theory about the process of learning through social experiences. The premise of Jarvis' learning process model is based on the assumption that all adults have experiences; some are good, some bad. Many experiences, however, may be so rote or routine that a person gains nothing from them. The learning process then calls for an experience out of the "norm," which elicits a

response at a different level than would be typically done. In other words, the experience requires some reflective action. This is the heart of Jarvis' model.

Jarvis posits that from an experience, there are nine different routes or responses a person can make:

1.   Presumption – mechanical response or a presumption that what has previously worked will work again.

2.   Non-Consideration – too preoccupied with something else to even consider the experience.

3.   Rejection – a conscious choice to reject the opportunity to learn.

4.   Preconscious – a person unconsciously internalizes something.

5.   Practice – practice a new skill until it is learned.

6.   Memorization – acquire information with which they have been presented and learn it so it can be reproduced at a later time.

7.   Contemplation – thinking about what is being learned.

8.   Reflective practice – similar to problem solving.

9.   Experimental learning – actually experimenting on one's environment.

The first three responses, presumption, non-consideration, and rejection are choices in which no learning takes place. In the second group of three, preconscious, practice, and memorization (which Jarvis considers non-reflective) a small amount of learning will occur. The final group of three, contemplation, reflective practice, and experimental learning are considered choices of reflective learning.

One effective way of incorporating andragogical theory into online education is by use of reflective and/or reflexive projects. Willis (1992) asserts that distance education

can be equally effective if the distance educator puts adequate preparation into

understanding the needs of the student and adapting the instruction accordingly.

The implications that Jarvis' theory has on teaching strategies for adults are

profound. Knowledge transfer is very important. However, this is not enough. "Finally,

knowing that this is how is not the same as having the skill to do so that this element is

also a major dimension of practical knowledge…" (Jarvis, 2002). Reflection and

application are very important parts of learning. Yet the question remaining is how best

to facilitate this for the adult learner.

Using the Jarvis theory in combination with the assumptions of Knowles'

andragogy model gives us some insight into how to best accomplish learning as defined

earlier in this paper. Knowles' adult learning model discussed previously also posits the

following:

1. An adult's self-concept moves from dependency to independency (or self-
   directedness.

2. An adult accumulates a reservoir of experiences, which can be used as a
   foundation to build learning.

3. Adults' preparedness to learn is increasingly associated with the development
   of their social roles.

4. An adult's time and curricular perspectives change from postponed to
   immediate application and from being subject-centered to being performance-
   centered.

5. An adult's motivation to learn is internal.

Therefore, by using these concepts in conjunction with Jarvis' model, a teacher or instructor should be able to prepare activities to facilitate reflective skills practice and experimental learning. Examples of these tools are:

1. Case study – By presenting the student with a case study problem and asking them to use their knowledge to create a possible solution, gives the learner an opportunity to reflect on and apply different strategies.

2. Paper writing – Writing a paper requiring some problem-solving application is an excellent way to allow the adult learner to reflect using new information as well as from their experience base.

3. Simulation – Simulating, as closely as possible to a realistic situation, allows the learner to not only reflect, but actually experiment with different approaches (which according to Jarvis is the highest level of learning).

4. Role-Playing – Role-playing is similar to simulation in that the learner is allowed the opportunity to practice in nearly realistic situations using reflection and experimentation

5. Journaling – Having the learner record their experiences in a journal is probably one of the best ways to facilitate the opportunity of reflection for the learner. "The journal serves two reflective purposes. First, it helps students to become reflective learners, recording data about reading, study habits, and attitudes. Students are also invited to write about their own personal development; that is, they can record information about their increasing knowledge, their increasing ability to identify and articulate issues and they can reflect on important decisions that they have taken since they enrolled in

the program. Second, students can examine their own self-development and their own feelings of empowerment (Jarvis, 2001).

Peter Jarvis' learning process model offers a very plausible and functional look at how learning occurs. His model also appears to be more of a theory of how learning occurs than some of the other adult learning models. This gives a better adult-learning map for the teacher to use in facilitating learning opportunities.

Reflective learning is congruent with the adragogical assumptions introduced by Malcolm Knowles. It seems logical then, that if a teacher or instructor of adult learners uses tools which give the learner the opportunity to reflect _and_ experiment with new situations/experiences, learning will occur and the learner will be a changed person; or as Jarvis would assert, they have experienced a higher form of learning.

Our educational system is changing and technology is rapidly changing. So, for this marriage to work, distance learning must be dynamic. Distance education may change, even restructure, education, but the distance learner must receive as complete, satisfying and acceptable experience as the traditional learner. If distance education is to be a successful, mainstream approach, then it is imperative that distance education systems be designed to permit similar learning experiences for distance *and* local students (McCall, n. d.).

Although contemporary, emotional predictions tout distance education, particularly through the use of the Internet, as the new "panacea" of educational opportunity this article has taken a systematic approach with a particular segment of higher education to identify needs and strategies of learning for the non-traditional, adult learner. As stated at the beginning of this work, getting and retaining adult students may

need various and innovative strategies. With so many social demands, traditional expectations, and other possible barriers to education, finding the right way to meet the needs of the adult as a learner, yet giving needed flexibility may be challenging.

The adult, non-traditional learner has different expectations and long-used pedagogies may not be effective for application with the adult. Therefore, a system that delivers methodologies for learning, which incorporates andragogical assumptions, reflective practice (to give opportunity to apply gained knowledge and experience), and a means of social interaction with the instructor and other students should be developed and delivered. More recent theories about adult learning are based on the assumption that the adult learner is self-directed, therefore, organizing educational opportunities outside of a formal setting. Optimal learning takes place when educational models include the learner's experiences, the relevance of the learning environment, the learner's eagerness to learn, and effective instructor facilitation (Brown, 2001). Yet, as this article points out, that may not be enough. Designers and facilitators of instruction must move away from context heavy classes, allowing the learner to work in an environment supportive of learning and development. They should role-model what they teach, incorporate practice into learning exercises, solicit reflective feedback from participants, and empower learners through self-assessment (Bell, Kehrhahn, & Sheckly, 2000). Most importantly, educators should view non-traditional learners using technology-based deliveries not only as independent learners, but also as *inter*dependent learners by incorporating social and reflective practices into instructional methodologies.

The Interdependence Learning Model for the non-traditional, adult learner online instruction is present in Figure 1.

Barriers to Education

- **Traditional Pedagogies**
- **Schedule Conflicts**
- **Responsibilities**

Non-Traditional Adult Student

- **Over 25 Years Old**
- **May Have Limited Higher Education Experience**

Adult Learning Assumptions

- **Self-Directedness**
- **Readiness to Learn**
- **Problem-Centered**
- **Plethora of Experiences**

Interdependent Online Instruction

- **Independent Study**
- **Self-Directed Learning Activities**
- **Enhanced Instructor–to-Student Interaction**
- **Facilitated Student-to-Student Interaction**
- **Reflective Activities**

Benefits of an Educated Adult

Empowered

Informed

Enlightened

Increased Social Conscience
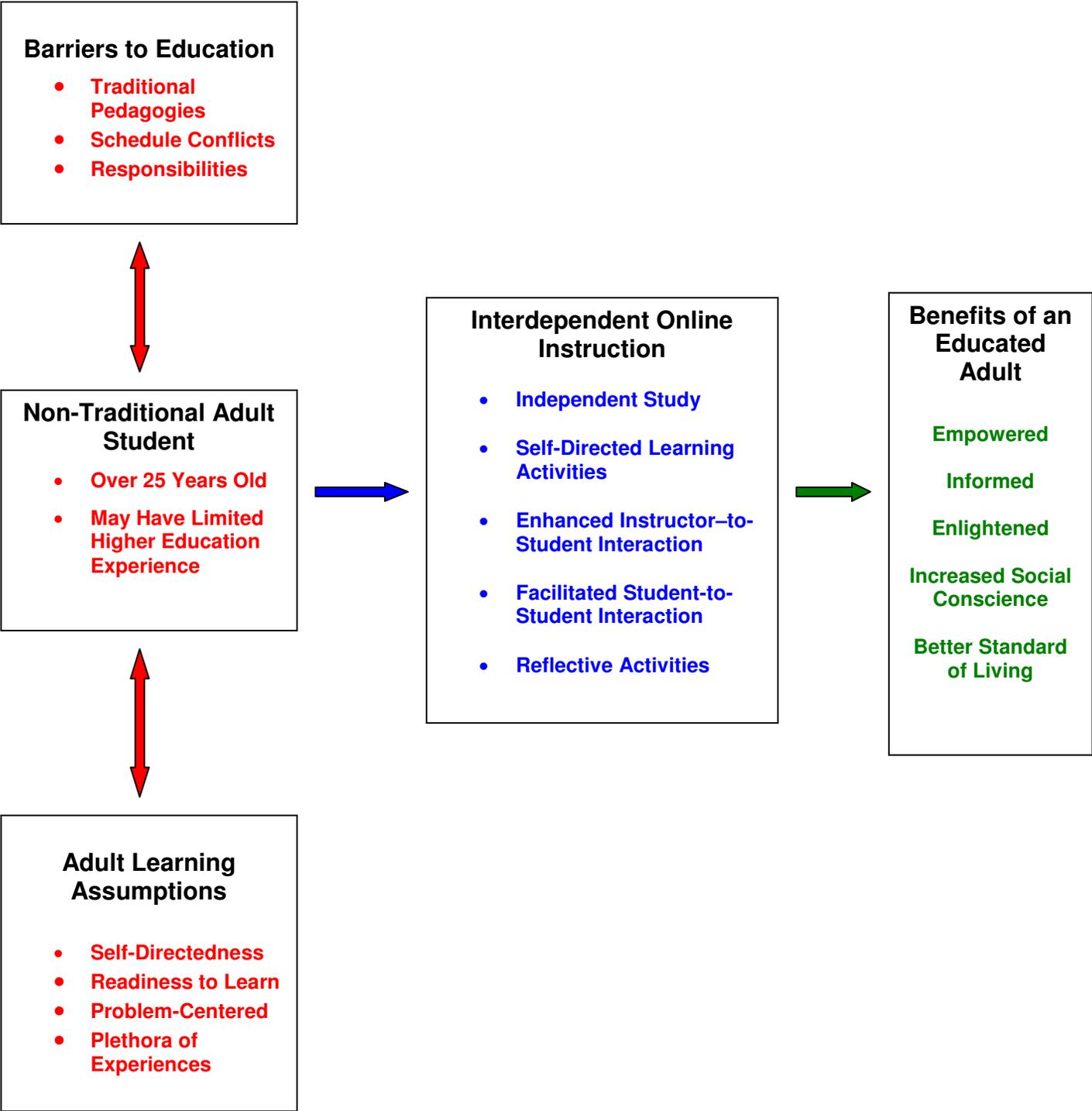
Better Standard of Living

Figure 1

Adult Interdependence Learning Model

Conclusion

This article provided relevant information about the attitudes, expectations, experiences, and needs of the non-traditional, adult learner regarding online instruction. Using this information should help guide online course designers, facilitators and instructors to meet the needs of the students, by developing educational models that incorporate the findings of the research data.

Once courses have been designed and implemented, further quantitative research may be warranted to determine effectiveness of the models. This could be very beneficial information for future curriculum and program development. In fact, entire degree programs now are, or soon may be, offered online and could be quite powerful if studies of effectiveness are undertaken and the findings implemented. However, the first step is to determine the attitudes, beliefs, values, expectations and experiences of the non-traditional learner, which this article hopefully, identified and reported. Further research may be necessary and should be undertaken soon.

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