

# LEARNING STYLES OF THE SELF-DIRECTED ADULT LEARNER IN DISTANCE EDUCATION

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## **Current Situation:**

Since educational radio made its debut in the early 1920s, the cost and complexity of technology has been a major factor in the instructional design of Distance Education (DE) courses.

Preparing and delivering DE course materials required lengthy preparation time by a team of skilled individuals and the use of complex, expensive equipment.

But today, a DE course is often planned, prepared and delivered solely by the instructor using a low cost personal computer, off-the-shelf software programs and a connection to the Internet. However, this liberating method of creating and delivering course content comes with a price. The DE instructor now often has the sole responsibility to effectively plan instruction for a wide range of student learning styles, often for students with which the instructor may never meet face to face. This paper will briefly examine how the concepts of learning styles and the attributes of the self-directed adult learner may serve as guideposts in the instructional design of a DE course.

## **Definitions:**

Learning styles may be defined as four dimensions that mediate the adaptive process of learning (Kolb 1985), or as striking differences in the way people learn and process information (Birkey and Rodman 1995).

The participating learning style may be defined as the learning preference of adults who are typically very open and feeling extroverts, who work well with group projects and situations that require flexibility and the need to quickly “think on your feet”. Structure, reflection and preparation are not strong traits of this style of adult learner (Kolb 1985).

The reflecting learning style may be defined as the learning preference of adults who are typically careful listeners who analyze large amounts of information and draw logical conclusions. Conversation, risk taking and collaboration are not strong skills of this learning style (Kolb 1985).

The structuring learning style may be defined as the learning preference of adults who are typically organized, focused and good at developing potential solutions and following tasks through to completion. Expressing emotion, working without structure and thinking “outside of the box” are not natural actions for a structured adult learner (Kolb 1985).

The experimenting learning style may be defined as the learning preference of adults who are typically skilled and pragmatic problem solvers, willing to take chances to find what potential solution will get results. Experimenters are often impatient and too direct in their problem solving and do not consider options carefully (Kolb 1985).

## **Related Items:**

Andragogy may be defined as the art and science of helping adults learn (Knowles 1975).

Distance Education may be defined as instructional delivery that does not constrain the student to be physically present in the same location as the instructor (Steiner 1995).

Learning objects may be defined as any entity, digital or non-digital, which can be used, re-used or referenced during technology supported learning (Shepherd 2002).

Self-directed learning may be defined as self-direction in a group experience (Tough 1971), learner directed education (Knowles 1975), or the process where adults take control of their own learning (Brookfield 1995).

### **Operational Definition:**

For purposes of this concept paper, the experimenting learning style will be defined as the learning preference of adults who are typically skilled and pragmatic problem solvers, willing to take chances to find what potential solution will get results (Kolb 1985).

### **Application:**

The Self-Directed Adult Learner

Andragogy (or learner-centered education) is often thought of as an invention of Malcolm Knowles but the term was actually introduced in 1833 by the German educator Alexander Kapp (Atherton 2002). Knowles can however be credited with fully developing this concept and his work has shaped adult education since the early 1970s. There are several assumptions Knowles makes about adult learners:

- The need to know: Adult learners need to know why they need to learn something before undertaking to learn it.
- Learner self-concept: Adults need to be responsible for their own decisions and to be treated as capable of self-direction.
- Role of learners' experience: Adult learners have a variety of experiences of life which represent the richest resource for learning.
- Readiness to learn: Adults are ready to learn those things they need to know in order to cope effectively with life situations.
- Orientation to learning: Adults are motivated to learn to the extent that they perceive that it will help them perform tasks they confront in their life situations (Knowles 1990).

Knowles most pertinent observation in the context of Distance Education is that adults want and need to feel a sense of control in their own learning process. The adult is responsible for decisions in their personal and professional life and logically should be responsible for choices in their educational life as well.

The flexibility of Distance Education is especially valuable to the adult learner as family responsibilities and work schedules often leave little time to attend class on a traditional campus. Distance Education may be the only way many adults can participate in learning through middle age and beyond. Adults can learn, from womb to tomb, from birth to death (Malone 2003).

### **Learning Styles**

Everyone has his or her own unique way of assimilating knowledge. However, there are four common dimensions of the learning process identified that we all share (Kolb 1984). These four methods of learning (learning styles) are best illustrated in Kolb's assessment tool that uses a circle with each of the four different styles positioned at north, south, east and west compass directions. Questions are asked to predict the adult learners preference for each of the four learning dimensions. The summed results are shown as a single point on each of the four axes, the closer to the outside of the circle the stronger the preference. The results of such a test can help show the adult learner and the instructor which learning style or mix of styles may be the most effective learning strategy.

Distance Education and the Adult Learner

Teacher centered learning does not recognize that adult learners accept responsibility to maximize the quality of their own education. The adult learner in the traditional classroom is expected to conform to the lesson plan that every student follows. However, Distance Education can offer flexibility in lesson planning to the teacher and the adult learner that would not be possible in a face-to-face classroom. Today, the DE instructor uses computer technology to routinely send and receive course material to and communicate with the DE adult learner. This same technology has the potential to help the instructor assess and better fit their electronic course to virtually every learning style of the adult learner.

Traditionally the syllabus is a paper document that describes the objectives; requirements and assessments of a teacher centered course. In the DE context a syllabus may become a more flexible, interactive electronic document that is customized by the adult learner with the collaboration of the instructor. Course objectives are still needed to assure educational requirements for the institution but course requirements and assessments could be negotiated between the adult learner and the instructor.

A web page form completed on-line by the student could be used to choose work assignment options; a text box section could be set up to for the student to describe proposed special or independent course assignments for the course. The weighting of each course element in the determination of the final grade could also be chosen. Pre-determined limits may be programmed into the web form to insure that a minimum number and mix of assignments are chosen and that the grade weighting of each course element equals the correct total of points. The completed proposed syllabus may be automatically formatted into an e-mail message and sent to both the instructor and the adult learner.

Even though the electronic syllabus has pre-determined limits on adult learner choices, some negotiation may be needed via e-mail to finalize the syllabus. The approved individual syllabus could then be entered into an automated assessment program that would assist the instructor in tracking the adult learners course progress. An individualized syllabus system would recognize the adult learners responsibility for their learning process and encourage “ownership” of the course document by both the instructor and the learner alike.

A modest, first time use of this negotiated syllabus may only provide the adult learner with only the choice of weighting assignments and a style and topic choice of written assignments with which an instructor can take the first steps in tailoring the Distance Education experience for the adult learner. Each time the course is offered more learning and assessment objects are added to the course resource pool affording the instructor and the adult learners in the future more variety and flexibility in the planning process.

The use and reuse of Distance Education electronic learning objects would be key to the design of an individual syllabus model that is easy for the instructor to implement. A learning object could be any type of prepared course media to support learning in the course:

- Audio lectures
- PowerPoint slideshows with self-assessments
- Independent readings in electronic format
- Case studies with audio interviews

The adult learner may choose a combination of these packaged learning objects to meet the course work requirements as defined in the syllabus.

Current Distance Education Technology and Practice

Low cost technology exists today to bring full motion video and sound of the instructor into every Distance Education learner's home anywhere in the world. But the reality is that only 20% of all Internet users in the United States have high-speed, broadband connections capable of carrying these signals; the percentage of Internet users worldwide using broadband is less than 1% (Tynan 2003). As a result of these bandwidth limitations, most DE students do not meet in a synchronous mode (where all view the same classroom event as it happens) but rather meet at any time or day in an asynchronous mode using e-mail messaging and the exchange of discrete electronic media files. Media files used today in DE are typically a mix of several types:

- Text (MS Word documents and Adobe PDF files)
- Graphics (PowerPoint slide shows and JPG images)
- Sound (MP3 and DSS audio files)
- Video (Realvideo and Windows WMV movie files)

These media files are typically used to support traditional, published textbooks used by the students. The DE student can pick up lecture materials and drop off completed assignments via a menu-based web-page delivery system. Delivery systems often support discussion forums where DE students can post messages on a variety of course related topics, collaborate on projects or share completed course work for peer review.

#### Distance Education and the Learning Styles

Often the adult learner collaborates with other students on course assignments by joining asynchronous discussion forums. The forming of learner pairs or groups many times is by random selection or alphabetical sequence. If the DE instructor had the results of students learning style assessments, a more enlightened grouping of students may occur.

The same paper based learning style questionnaire described earlier can be altered to work easily on a web page. Each new student in a DE course could be asked to complete the simple questionnaire on or before the first day of class and the results could be automatically formatted into an e-mail message sent to both the instructor and the adult learner. The e-mail message could also explain how the results of their questionnaire might be used to choose the best options for assignments and activities in the course.

The Kolb learning style circle illustrates clearly that individuals on opposite sides of the circle have opposite interests, styles and temperaments. A north person (participating learner) is nearly the exact opposite of a south person (structuring learner). Similarly, an east person (experimenting learner) is nearly the opposite in learning style with a west person (reflecting learner). Understanding and using the concept of learning styles may be a valuable tool for the Distance Education instructor in planning more effective collaboration forums on-line by grouping students in a more enlightened fashion.

Discussion forums in DE may use a variety of methods for communications between members that suits the aggregate style of the group. Forums may be designed to use any combination of the following modalities:

- Text only discussion forums
- Voice message discussion forums
- Formal, mediated discussion forums
- Informal, private discussion forums

Assignments for group collaborations may be made to complement the aggregate learning style of the entire group if the learning styles are known and understood by the instructor.

Electronic based distance education delivery systems may be easily configured to fit the concept of various learning styles in the adult learner. The same lecture material may be delivered simultaneously in various formats to target several learning styles:

- PowerPoint slideshow (lecture topics with graphics)
- PowerPoint slideshow with accompanying audio lecture
- Text only version of lecture topics

**Conclusion:**

The concepts of learning style and self-directed learning may serve as guides for the instructor to more effectively plan and execute Distance Education for adults. Further research and development may be necessary in the area of practical implementation solutions to assist the instructor in the preparation of quality DE courses for adults.

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