Reflective Practices in Online Education for Non-Traditional Students

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Abstract

The goal of this research was to better understand the lived experiences and perceptions of nontraditional, adult college students in an asynchronous online environment. Contemporary researchers have investigated the differences between online education and the traditional, in-class learning. Most of the work has been done in quantitative methodologies, focusing on the similarities and differences in cognitive achievement. The extant literature is replete with studies and positions claiming little or no difference between the two delivery methods. However, most research is not presented in a theoretical construct; therefore, it is difficult to create a nexus between one study and the next. Investigating the different ways in which students report their experiences and perceptions in the asynchronous, online environment provides a much richer understanding of nontraditional, adult students.

One interesting result of the study was the student’s perception and experience of the importance of using reflection and/or reflective activities in meeting educational objectives. This was particularly true in assignments and communication through online discussion boards.
Introduction

The goal of this study was to better understand the lived experiences, perceptions, and attitudes of nontraditional, adult college students in an asynchronous, online environment. This understanding was achieved through rigorous analysis of in-depth, semi-structured interviews and the journal entries of nontraditional, adult students enrolled in an online, Emergency Services baccalaureate degree program. The online bachelor’s program was offered by Utah Valley University. The purpose of the analysis was to describe the various experiences and perceptions and then group these experiences and perceptions into a logically organized description of the lived experience of adult emergency services students in the asynchronous online environment.

Since the inception of online learning, researchers have studied and investigated the differences between online (or distance) education and the traditional, in-class learning. Most of the work has been done in quantitative methodologies, focusing on the similarities and differences in the cognitive achievement of students. The extant literature is replete with studies and positions claiming little or no difference between the two delivery methods. In fact, an entire website (www.nosignificantdifference.org) has been developed for the promulgation of data regarding the lack of difference between traditional and online learning. However, most of the research is not presented in a theoretical construct; therefore, it is difficult to create a nexus between one study and the next. Investigating the different ways in which the students report their experiences and perceptions in the asynchronous, online environment provides a much richer understanding of the nontraditional, adult students’ experience. Using the assumptions of Knowles’ andragogy and the concepts of constructivist theory asserted by Piaget, Vygotsky, and others adds to the understanding of the lived experience of the nontraditional, adult student in the
asynchronous, online environment. Smith, Smith, and Boone (2000) offered this need for research at the conclusion of their study on the effectiveness of traditional instructional methods in online learning environments.

Because little research concerning distance education via an online format has been conducted there is a need to continue studies in this area. Based on the results of this study the following areas are suggested for further research: (1) Additional research into the use of traditional instructional methods used in online learning environments and not covered in this study should be investigated. Different forms of instruction such as collaborative learning and independent study are being used to present courses on the Internet. Additional research into the effectiveness of these forms of instruction would be valuable. (2) Research that looks closely at the way students accept or reject the Internet as a medium for learning should be investigated. Student satisfaction with the instruction may be a determining factor in whether or not a course will be accepted. (3) As online learning environments continue to evolve, especially with the rapid growth of technology, they need to be studied. An understanding of these environments can lead to better design of instruction and a better understanding of the learning that occurs when using online learning environments. (4) Many institutions are considering online learning environments as a sole method for the delivery of instruction, eliminating, replacing, or substituting the personal face-to-face contact provided in the traditional classroom. Research is needed to determine the longitudinal effects on learning and understanding that online learning environments will have. (5) Finally, research is needed to identify those characteristics that increase student participation in an online setting. An understanding of the effects that the instruction, the delivery, or the levels of interactivity have on the overall success of an online learning environment would be most interesting. (p. 45)

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.

There is a concern for the human or social dimension of online learning environments. The technical components of distance education are often discussed, 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?

Andragogical (adult learning) assumption may yet prove to be of great value in distance education, particularly in light of the changing demographics of many, if not most universities and colleges. Adult students seem to have a different learning style requiring a careful approach.
when using modern technology (Pelletier, 2005). This may be particularly true for the emergency services worker (police, fire, emergency medical services workers, and emergency managers).

Due to the nature of their jobs, previous training, and education experiences, like most adult students, they have an expectation for immediate response and effect (Fidishun, n.d., p. 2). Also, most of the students from this group are 25 years of age or older (the nontraditional student profile) and are accustomed to being self-directed (Gibbons & Wentworth, 2001). Enticing mature emergency services adults to return to school and retaining them as students may be challenging because of conflicting work schedules, family responsibilities, and possibly fear due to the length of time he or she has been away from formal educational experiences. Online delivery may just prove to be the solution.

For the nontraditional adult students, such as fire and emergency services workers, online delivery of information, which does not include a way of integrating life experience into the model, may not be accepted well (Berg, 2005). The initial training and education of the emergency services workers is heavily dependent on memorization of procedures and practices, followed by repetitive psychomotor skills application. The rest of their education is derived through on-the-job experience. This identifies an issue of lack of research regarding learning styles for adult learners like emergency services workers. “Identifying whether courses and programs are responsive to the learning styles of the emergency responder student is an issue that has not been adequately addressed in either responsible training programs or educational institutions of these students” (Klingonsmith, 2006, p. 15).

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).

Traditionally, research regarding online learning has been quantitative in nature. Most of this research has been targeted toward comparing student cognition in traditional, face-to-face delivery to online learning. Yet, not all research is by nature quantitative.

Krathwohl and colleagues (1964), after many exploratory meetings with college and university examiners, identified divisions within the objectives of education. They identified them as:

1. **Cognitive**: Objectives that emphasize remembering, recalling or reproducing something that has been believed to be learned. Cognitive objectives also vary from simple recall of material to combining and synthesizing new ideas and/or material.

2. **Affective**: Objectives that emphasize a feeling, an emotion, or acceptance or rejection
of material. They further identified these objectives as interests, attitudes, appreciations, values, and emotional sets or biases.

3. Psychomotor: Objectives that emphasize motor skills (muscular), manipulation of materials and objects, or some act that requires a neuromuscular coordination.

As stated above, most of the research regarding online learning has centered in the cognitive domain. There exist many comparative studies centering on cognitive results through examination and grades, and the similarities and/or differences between online and traditional face-to-face deliveries. Most of the research finds no significant difference between the traditional face-to-face delivery and online formats. In fact, in some research, online students were found to score higher or receive higher grades than students in traditional programs (Meyer, 2002). Yet, there are far fewer studies regarding the experiences, perceptions, and attitudes or affective domain behaviors in the literature. Most of these deal with traditional student demographics.

When contrasting the cognitive domain with the affective domain, some important distinctions become apparent. The cognitive domain concerns itself with the belief that the student should be able to do a task when requested. The affective domain seems more concerned that the student does do a task when it is appropriate, after learning that he/she can do it (Krathwohl et al., 1964). Put into simpler terms, the cognitive domain is “can do” while the affective domain is “does do.” However, compartmentalizing these behaviors into cognition and affect is not as easy as it may appear. Rarely is the teacher or curriculum developer intending that one is independent of the other. There is a good deal of research that shows that cognition cannot be completely separated from affect. A more interesting idea is the possibility that one is the effect of the other. There may even be a deeper relationship or effect between cognitive and
affective domains (Krathwohl et al., 1964, p. 20). If this is the case, then understanding how students develop in the affective domain may be of significant importance in developing and delivering curricula for use in asynchronous, online environments.

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).

**METHODS**

*Design*

The review of the literature led to the research question: How do nontraditional, adult undergraduate students experience asynchronous, online instruction? A qualitative study was most appropriate to explore this question.

The students of this study were purposely selected based on two criteria: (a) they were nontraditional adult learners (which are students over the age of 25 years who may or may not have some prior higher educational experience and/or may or may not be employed in a career field), and (b) they were enrolled in the Emergency Services Management Bachelor’s Degree Program.

To best gain insight into this experience, in-depth interviews were conducted with four students enrolled in a Bachelor of Science in Public Emergency Services Management program. In addition to the interviews, each student was asked to keep a journal of personal feelings and experiences throughout the course and submit them at least on a weekly basis.

The students of this study varied in age and experience. They ranged from 26 to 49 years of age and consisted of a firefighter, two fire captains, and a detective from a police agency.
Three of them were married and one divorced. Each had children as well as other family and community responsibilities. Each also had limited higher education experience.

RESULTS

Analysis

A constant comparative analysis was used to analyze the data through analysis of the transcribed interviews and the text of the submitted journal entries. Care was taken to ensure that the original intent of each statement had not been compromised by the meaning(s) derived. The aggregate meanings were then coded (grouped or clustered by theme). Several codes or themes were identified or differentiated. This process led to the need of further interviewing for clarification or more detailed information, and then more grouping or coding until saturation had been achieved. To verify the themes, they were compared to the original statements to ensure that something significant in the original statements had not been left out in the groupings or that the coding created something not in the original statements. A structural description was used to identify all possible meanings and perspectives to construct a description of how the phenomenon was experienced by the participants. Lastly, an overall description of the meaning of the experience or phenomenon was developed (Creswell, 1998).

Verification

To verify the findings, the phenomenon description was presented to participants for their review. The participants reviewed the interpretation and presentation of the data. With the exception of some word editing for clarity, each student agreed that the description fairly summarized his experience and the data was considered verified. This was the process of member checking, whereby participants provided insights and deeper understanding as they reviewed the transcripts; that is, the meaning was negotiated between the participants and the
Next, a peer to review of the data was conducted of the analysis to ensure that the process was consistent and held to the integrity of the intent of the students and that bias was kept minimal. The selected peer reviewed the material and felt satisfied that the study results were consistent with the lived experience of the students.

**Findings**

Two overarching themes, each supported with a number of sub-themes emerged about nontraditional adult students in the emergency services online program. The first theme, *Flexible Learning* exemplified the adult learning assumptions of convenience, self-directedness/self-discipline, and reflectivity. The second theme, *Conflict of Values: A Paradox of Learning*, addressed the comparison of the traditional (face-to-face) learning experience with a new (online) experience and contrasted student-to-student communication/socialization, student and instructor interaction, and paradigmatic shifting and conflicted beliefs on learning. One of the sub-themes appeared to be present throughout the process of the study and reflectivity the focus of this paper.

**Reflectivity**

The following statement of one of the study participants points out the importance of reflective activities in online instruction.

It’s important for instructors to pose good, thought provoking research/essay assignments, to facilitate students to put more mental effort into the class. The more mental effort I direct, the more I learn and grow throughout the class.

Because this course was designed using case studies to present material and paper writing as the means of assessment, the students were able to use reflective practices and many times at a different level. Unlike many classes where the student must remember facts, formulas, dates,
etc., this class facilitated the students’ learning by allowing them to reflect on how the principles can be or are applied in their lives. The online discussion boards were particularly useful in this reflective activity. The students reported that conversations on the discussion board were at a deeper level than they experienced in traditional classes due to the fact they did not have to respond immediately as in a face-to-face conversations. The discussion boards allowed or facilitated more reflectivity, and the conversations were backed by more research and/or critical thought. Some of the student comments were:

I was able to get on the internet and complete my discussion board postings. This was a good week for the discussion board the topic “Open door policy” brought out some great thoughts. I think as a company officer I got a better understanding of what it means to different people and how I should conduct an open door policy. It also gave me some ideas of how to use the open door as an employee.

If I were to have the same sort of discussion with someone through basically an email or face-to-face, I think it would be different, because I don’t think I am really a good speaker and I don’t think I am good with a direct confrontation-type of dealing with people. But then on the other hand, I think I would do better with the email (discussion board) because I can, I have a little bit more time to gather my thoughts, think about how I am going to say it and if I don’t like it I can just go back and erase it and nobody knows the difference. Whereas as soon as you say something and it comes out of your mouth it’s in space and you can’t ever take it back.

One of the students liked the currency of the discussions and how they applied to his situation.

Yeah, because I think a lot of the things we did discuss are occurring. You know, I am seeing it happen in our city, as we are growing up and we have a new full-time fire department, we see all this, we are experiencing those things.

Another shared a similar experience about reflectivity and the immediacy of application. The deeper reflection of the student postings and the topic assignments seemed important.

While studying the topic it’s important to keep an open mind about current events and see if there is anything relevant going on in the world right now; see, read and learn about what’s happening and apply it to what you are studying.

As previously presented, the depth of the discussion seemed to be more useful to the students than the typical “in class” discussions that occur in the face-to-face classes. This was
something that was reinforced many times in the interviews and through the journal entries, as demonstrated from this entry.

In this format, the discussion board allows us to comment and reply to other students’ postings as well. This gives us a chance to elaborate on topics and issues, while allowing us time to respond to comments, gather our thoughts, and choose our words more carefully. In a classroom setting, on the other hand, there is not so much opportunity for that. In the classroom discussions happen in real-time/real-life speed.

He later shared this: “As long as the student takes the time to read and ponder, a lot can be learned from the responses of other students on the discussion postings.”

For one student, knowing that others were putting thought into their discussion board postings was important. He stated: “I think overall, it helps because you read some of the discussions and there is a lot of thought put into them. I mean, you can tell that they’ve spent time doing it.”

One thing that became apparent is the common appreciative experience of being able to use the time to reflect in the online environment. Most of the students felt that maybe they were not as quick to learn or bright as some of the other students and the ability to take time to think of responses or to research and reflect before writing was very important. Some of their feelings were shared in their comments.

Well, Google has been my best friend; I just “Google” whatever I don’t know and start reading. And then it actually peaks my curiosity to read more about the NFPA and how it translates into my life and my codes and um, um. So, I guess the whole online kind of thing forces you to dig more than the surface, more than an instructor can cover; cause they have to get through A to B in this amount of time, whereas online I can just—but I spend more time researching and looking into things than I ever would in there [traditional class].

I am a slow learner. And, for me to sit down and I have to sit down and just type the paper without stopping, but most of the time I have to really put a lot of thought and process into things. Even in the discussions, I sit there and I write them and I re-read them and I take things out. So, I am able to refine things a lot better for me to make them the way I want them instead of just throwing them out.
In a follow up to this statement, one student was asked if the fact that he is looking at his words while writing and not just hearing them, had any impact on the depth and/or thoughtfulness of his discussions. His reply was revealing.

Being able to read and edit my replies allows me to focus more on the subject. In a face-to-face class, the conversations tend to get off track and a lot of unnecessary discussion takes place. Sometimes I say things that I have not thought about very much and I often add things to the conversation that aren’t very intelligent. But, with the online discussions, I can think about, write and revise what I am going to say. I think this gives me a much better opportunity to understand the subject and the other students’ viewpoints as well.

The flexibility of the online classes seemed to allow for more time on reflective thinking. Also, the students were left, or at least felt that they were left to determine the direction and depth of their work. They were not given a lot of direction from the instructor—at least not as much as they had previously experienced in traditional classes. This was a common feeling among the students. One of them offered how the online environment works for him.

I think it would be repetition or I don’t know if it’s even doing maybe a little bit repetition, but for some reason it seems like that research and then putting, you know, getting three or four references, reading, paraphrasing, putting it in my own words and putting it back on paper in my own thoughts. Things just seem to click for me that way. I don’t really know what to call that it’s just gathering all that information and having to process it and regurgitate it on paper has that seems to have worked for me.

Another offered the following,

I think this class was good because the topics that were given to us were, they were uh, simple enough—simply enough stated that they gave us a lot of latitude with where we went with it. Yet, I think the instructor had in mind kind of what he wanted us to get out of it and knew that we would kind of discover it on our own. As we got through and you know, through the whole research process, trying to decide what I wanted to, wanted to do my papers on, on my own, I just kind of found a direction on my own and pursued it and then I’d be part way through and I would be like, “I really need to add something else right here, here’s kind of the direction I want to go and then go back a find something that would kind of substantiate my, whatever statement I was pursuing. And so I liked it. I feel like I got a lot out of it and kind of was able to come to conclusions I had internally, that you know, I hadn’t really focused attention on to, to try to resolve anything, just sort of miscellaneous indirect conflict. And I don’t know, I think I made a lot of progress with it.
This was backed up by a third student who also liked the way the online class format helped him.

Think it through, you know, you read a book sometimes and maybe you have just kind of a general platform if you will, a small platform of what they’re trying to teach, but then if you go to other areas to extract the data or research what somebody else has done and has three or four references, plus the book you’re reading and just process them all together. The online class really helped with this.

This particular course did not have a lot of what the students would call “busy” work. The lack of busy work was an important feature of the course design for the students, which they thought enhanced the reflective process. One participant offered that he did not like to be directed through those types of activities: “So I like having to be able to research myself instead of being a slave to, because they can steer your whole train of thought versus me finding what I want to.”

The youngest participant was more direct in his feelings about busy work and reflectivity.

Well, just knowing that I don’t have to have the monotony of dealing with busy-work gives me a little bit better piece of mind, but ah, just kind of frees me up for other things where I can then focus my other energies on—ok, I am going to do this paper and I have to dedicate more thought to whatever the topic was or find in my research. And I actually find I probably dedicate more time, more mental focus time in the day to thinking about, “ok, what am I going to do for this,” and it’s a little bit more of a conscious thing rather than have it be all separated out with “hey I have got to just hurry and whip out this busy work assignment.”

The student was then asked why the online class was different from the traditional class in terms of busy work. He readily shared his feelings,

In some of the traditional classes I have attended, it seemed that the instructor would give us some busy work to fill in the time we were supposed to be in class. In most of the online classes I have had there are not many worksheets or other time-filling activities. This means I have more time to pursue or research the material in the way I think is best for me and what I want to present.

One item found particularly interesting was the student experiences and perceptions regarding the writing process and reflectivity. Metacognition or “thinking about thinking” was
evident in the interviews and journal entries. These students put a lot of time into thinking about how they learn and the processes they had to use in this online environment. For the most part it was a positive experience for all. Once again it was the youngest participant who offered the most regarding the writing process and reflectivity; most of it was from journal entries, which is a reflective activity itself.

When I write I can thoroughly explore where my opinions originate from; why and what events in my life have led me to have that belief or value. In writing I can talk myself into something or talk myself out of it. I can expound my emotions into words. When I write, it’s like I’m having a close, intimate conversation with myself. Things come out in writing that probably never would have come out any other way. I never have to put on a charade or a façade; I can be perfectly frank and honest and tell it like it is.

His self-talk revelation was intriguing so as a follow-up he was asked what he felt he learned through this. He replied:

Mostly, I learned that I am a good writer and that this made communication easier for me. I also learned that I may need to work on my verbal communication skills. When I write, it is easy to go deeper into my beliefs and thoughts. When I am speaking, I tend to stay more on the surface and my communication is not as thorough.

Another student also found the online convenience of more time and the paper writing experience of great value.

But I—actually the research and writing the papers—surprised myself how much I can learn by that. If I just read a book, I don't learn it that way. I have to read it a couple of times and really go through it and really try to pick it apart and I’m not sure I grasp it. Plus, in reading, and then doing research and writing a paper and putting that all together has been great for me.

A third shared how he likes to take his time in creating the papers and actually researches and reflects longer than he thinks other students may. Not having to go to a scheduled class makes this time more valuable.

I like to be precise. So, I think I spend more time researching some of the papers than I need to just so I know that what I am writing is what needs to be written instead of just putting something down on paper. So I think sometimes that I spend more time researching than I do to write the paper so it takes me longer to do things.
In one particularly interesting and personal journal entry, one of them shared the process he went through to make meaning of one of the assignments. Unlike the traditional class, where he may have been able to get more direction, he was left to find some of this for himself. In reading the following journal entry and later in discussing the process, this was a moving point for him in this class.

In my paper I examined political equality in our nation. Whenever there is a discussion of equality in a nation; liberty, human/individual rights, and freedom follow close at hand. In my research I became very deeply engaged in learning about the constitution, the founding fathers, declaration of independence and other remarkable events that strengthened political equality and freedoms in our country. I had an amazing time learning about the history and sacrifices of those early American patriots who gave us the rights and liberty we enjoy. The slavery issue followed right behind and I gained new insight by reading about that era. Although I only mentioned this briefly in my paper to provide an example of political inequality, I actually spent several hours submerged in the history of it all. And again as stated above, I’m not sure I did the assignment right, but I learned and grew a lot by pursuing this topic on my own.

At one point while I was reading about the segregation that existed in many parts of the country in the early 1900s, I was reminded of a time when I had lived in Japan and I was the different one. I know what it’s like to be a minority in a foreign country. You feel out of place and awkward. I’ll never forget the first time a group of little kids teased us because we looked funny and were different from them. I thought this was odd for them to be making fun of me for identifying with my culture and ethnicity. We (the Americans) were the ones who were supposed to look normal, didn’t they know that? They laughed that our eyes were so wide open and that we had blonde hair and blue eyes. It was all very surreal. For the first time in my life I was the minority, it was a different feeling. I got somewhat of a unique perspective from this, as the tables had turned and I was on the other side of the looking glass.

It was summed it up well when referring to the online process one of the participants said: “Yeah, I learn more and in the long run I think it makes more sense to me after to, like I say, to research the things out and realize—really come to understand why I am doing it—the meaning of it.”

**DISCUSSION**

*Adult Learning Models*
The results of this study appeared to be consistent with many of the theories and assumptions of the adult learner. A more detailed look at some of these theories/assumptions is presented below.

**Andragogy.** Since the early 1970s, when Malcolm Knowles first introduced the concept of andragogy to the United States, adult learning theories and assumptions have been developed and debated. This study revealed that the nontraditional adult student in an asynchronous, online environment experienced and reinforced adult learning assumptions. In Knowles’ original work (1970), he offered a set of criteria that sets apart the adult learner from the child learner. They are: (a) 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; (b) 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; (c) 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; (d) 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; and (e) motivation to learn is intrinsic rather than extrinsic. Looking at each of these assumptions and comparing them to the experience of the students is interesting and the results of the study seem to affirm Knowles’ assumptions.

One underlying question: does the asynchronous learning environment fit the assumptions of andragogy and is it a good way for adults (specifically, fire and emergency services personnel) to learn? From the results of this study, the particular student experience(s)
affirms the effectiveness of online learning for the nontraditional adult. This is also consistent with the writings of Rossman (2000), who asserts that distance education and distance learning programs are popular ways for adults to learn.

*Jarvis’ process of learning.* British researcher and teacher, Peter Jarvis, introduced an adult learning model based around experience. Jarvis (1987) posited that all learning begins with experience and more particularly, social experience. Some of these experiences are repeated often enough that they become routine and therefore do not lead to learning. Other experiences are so “out of the norm” that prior learning methods no longer work with the situation. This new experience causes a person to reassess, rethink, or create a new plan for how to act or what to do. Jarvis believed this process fits one of three groups of strategies or responses (Merriam & Cafferella, 1999).

Jarvis (1987) 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 the top choices of reflective learning.

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 andragogical 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 and/or electronic education may change or even restructure education, but the distance/e- 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.).
Affective domain. Affective learning outcomes involve attitudes, motivation, and values (Miller, 2005). As can be seen from previous discussion and the amount of research available, the cognitive approach to online education has been the focus of research. Hence, it appears much emphasis has been put forward asserting the best way to get to the affective domain is through the cognitive domain. Once a student has achieved “cognition” it is assumed that the student will then apply the knowledge and by process, have a change in attitude or be “affected.” Krathwhol and colleagues (1964) posed an interesting question: What if the reverse was applied—using the affective domain to achieve cognition? This posits that educators must be more aware of the affective domain (motivation, drives, and emotions) to develop or bring about achievement of cognitive behavior. “Obviously motivation is critical to learning and thus is one of the major ways in which the affective domain is used as a means to the cognitive” (Krathwhol et al., p. 57).

Krathwhol’s taxonomy (Krathwhol et al., 1964) attempted to classify learning in the affective domain. It posits that the intensity of a given attitude is built through successive stages. This means that learning at a given level is dependent on prior learning at lower levels, hence, the five levels of taxonomy: (a) receiving/attending (willingness to become aware); (b) responding (appreciating or internalizing); (c) valuing (accepting, preferring or becoming committed to); (d) conceptualizing/organizing (incorporating into a value system); and (e) characterizing by value (orientation toward or identification with).

CONCLUSION

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 paper 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 interdependent learners by incorporating social and reflective practices into instructional methodologies.

References


