Factors Affecting Participation in Online Learning: Evidences from Andragogy

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ABSTRACT

As rapidly improving technology integrating learning and instruction, it is our intent to examine substantial factors that are more or less associated with online learning based on empirical studies. More specifically, the aim is to explore factors that are associated with learning performance in the context of e-learning from the andragogical aspect. On the basis of the findings, the key factors that influence participation in online learning include sense of community, instructor involvement, life characteristics and prior experiences, interaction, learning styles, and motivation. There may be a reciprocal relationship among those factors.

Keywords: online learning, online participation, andragogy

INTRODUCTION

A goal of contemporary education is to transform learners into self-directed, proactive learners. As Knowles (1988) postulated in his adult learning theory, self-directed learning facilitates the ability to take control of the techniques and the purpose of learning. In urban colleges and universities, adult learners are accustomed to choose courses that are traditional face-to-face (FTF), online, or the blend instruction. With the advent of the computational technology era, “Technology has the potential to open the doors of the university to a wider audience, provide choices for non-traditional students, and extend services to populations that would otherwise not be able to attend the classes on campus” (Wright, Marsh, & Miller, 2000, p. 107). The diversity of adult learners has been increasing in higher education institutions, particularly in urban colleges and universities. More nontraditional students enroll in both nondegree and degree programs for the sake of career advancement and self-asp?iration. Nontraditional students are defined in several ways: (a) They have multiple roles (e.g., parent, employee) in addition to being students (Chartrand, 1990); (b) they have at least 1 year between high school and college (Dill & Henley, 1998); and (c) the age break between nontraditional and traditional students ranges from 22 to 28 depending on their majors and the urbanicity of their residency. Facing increasing heterogeneity and a growing student body, higher education is being challenged by student retention and academic accountability. Serving such a diverse student population in a wide variety of venues has become critical in higher education (Bates, 1997).

Online and blend instruction offer our learners an opportunity to learn ubiquitously without being limited to the constraints of time and distance. More and more adult learners are experiencing the great accessibility that computer technologies have brought. Many researchers (Kessell, 2000; Roberts, 2000; Maeoff, 2003) found that many adult learners are interested in gaining advanced degrees and certifications via distributed learning because of the flexibility that it offers. As rapidly improving technology integrating learning and instruction, it is our intent to examine substantial factors that are more or less associated with online learning based on empirical studies. More specifically, the aim is to explore factors that are associated with learning performance in the context of e-learning from the andragogical aspect.

LITERATURE REVIEW

Online Learning and Participation

A precise definition of online learning is difficult, for it involves a variety of technologies. Online learning does not necessarily refer to asynchronicity; instead, online learning could include real-time video conferencing or chat rooms to
make it synchronous. Regardless, Jolliffe, Ritter, & Stevens (2001) pointed out that online learning often takes advantage of some elements of asynchronous learning networks such as computer forums to assist learners with organizing and processing the learning materials. Online participation, on the other hand, is associated with whether authentic learning occurs. Many studies use quantitative measure units such as number of postings or total quantity of login. In their in-depth case study to graduate online courses, Vonderwell & Sachariah (2005) define participation as “taking part and joining in a dialogue for engaged and active learning” (p.214). They further explain “participation is more than the total number of student postings in a discussion forum” (p.214). It is essential for adult learners to be engaged in active, student-centered learning.

Comparing to the traditional, face-to-face (FTF) learning, online learning offers four major strengths. First, the online learning environment provides “instructional work areas that are open for use any time” (Berge, Collins, & Dougherty, 2000, p. 35). Learning can occur outside classrooms. In addition, online learning expands the traditional perspective of learning. Heuristically, Hannafin, Land, and Oliver (1999) stressed that prerequisites of open learning environments are self-directed learning and learning autonomy to tackle relevant, real-world problems. Additionally, communication tools, entailing both synchronous and asynchronous modes, provide means for information manipulation and resource inquiry.

Second, the online learning environment recognizes that learners with heterogeneous characteristics in terms of prior experiences, skills, and attitudinal differences proceed with learning at their own pace (Jollife et al., 2001).

Third, Sanders and Morrison-Shetlar (2001) argued that the online environment has a highly positive effect on student learning with respect to problem solving and critical thinking skills. Presumably, the asynchronous online learning environment provides sufficient time to deepen ideas and offers an opportunity for divergent conversions, as opposed to synchronous, face-to-face learning environments. Asynchronous text-based online discussions have been suggested as a substitute for classroom interaction in online courses; such potential allows additional reflection and posting of revisions to promote reflective and critical thinking, perhaps further encouraged by the perception that postings have more permanence than spoken words (Jaeger, 1995). In her qualitative investigation of learning-centered educational experiences, Petrides (2002) reported that when a student responds to distributed or distance-learning environments, “it allows for more freedom of thought and discussion” (p. 72). Moreover, in their comparison study of student satisfaction in synchronous and asynchronous course instruction, Wright et al. (2000) reported that the asynchronous group scored higher at both pre- and posttests than the synchronous group, and the asynchronous group appeared to be more active in learning preference than the synchronous group. The potential enhancement of both quality and quantity of student interaction and learning experiences might be another strength of instructional immediacy, especially in determining whether instructor immediacy is satisfactory.

Lastly, the fourth strength is that the online learning environment strongly reflects on learning preference and self-regulation. Neuhauser (2002) concluded in her study comparing online and face-to-face instruction that an effective distance learner has characteristics of being a strong self-starter, self-disciplined, and knowledgeable of technology requirements. Learners in online education are required to be self-directed, intrinsically motivated, and proficient in computer technology (Irizarry, 2002). That is, independent learners prefer independent study and self-paced instruction and would prefer to work alone rather than with others on course projects; whereas dependent learners look to their teachers and peers as a source of structure and guidance and prefer an authority figure to tell them what to do (Diaz & Cartnal, 1999). Presumably, independent learners tend to be more motivated because they decide when and where to learn as well as how the learning process proceeds. Compared with a traditional, face-to-face learning environment, online instruction requires more learning autonomy. It is plausible that a proactive learner in a rather low-structured learning environment like the online, Web-based setting tends to learn more effectively than a reactive learner. As a whole, because the two different instructional environments are structured and delivered differently, ample factors associated with learning outcomes such as high–low course structure should be taken into account in addition to learning style and life characteristics.

**Adult Learners and Andragogy**

Knowles’ (1984) *Theory of Andragogy* is an attempt to develop a theory specifically for adult learning. Based on
Knowle, Andragogy applies to any form of adult learning and has been used extensively in the design of organizational training programs. Unlike K–12 education, students in higher education are all adults and consisted of unique student characteristics. Their age and life characteristics make them different from children. As Cross (1981) suggested in her Characteristics of Adults as Learners (CAL) model, two clusters of variables should be considered: (a) personal characteristics referring to aging, life phases, and developmental stages and (b) situational characteristics referring to part-time versus full-time and voluntary versus compulsory learning. In the personal characteristics, the three components often intertwine and have reciprocal impacts on one another.

A clear-cut differentiation between traditional students and nontraditional students is difficult. The divided age for the two types of students varies from study to study and from subject to subject. Some refer to those aged 22 or older as nontraditional students (Hruby, 1985; Morris, Brooks, & May, 2003; Neuhauser, 2002); others set the dividing mark at age 24 (Dill & Henley, 1998; Collins, 1999; Rosental, Fols, Alleman, Boudreaux, Soper, & Bergen, 2000; Kuh & Hu, 2001) or even at age 25 (Ryder, Bowman, & Newman, 1994; Donohue & Wong, 1997; Miglietti & Strange, 1998; Sizoo, Malhotra, & Bearson, 2003). Very few justify the rationale for such grouping. Defining traditional and nontraditional college students based on subject areas and urbanicity (or regions) warrants further endeavor.

With the rapidly increasing number of nontraditional college students, Morris et al. (2003) pointed out that traditional and nontraditional college students employ different coping styles when encountering a stressful situation and also differ significantly in learning-related goal orientation. In addition to the situational characteristics, nontraditional and traditional college students also vary in the way they learn most effectively and in the way they prefer to learn. Sizoo et al. (2003) found that learning strengths and weaknesses of both full- and part-time nontraditional college students are distinct from those of traditional college students.

Conceptual Model and Proposition Development

Based on extensive literature review, the proposed model is presented in Figure 1.

Recent trends support the “learning communities” approach (Reigeluth, 1999) to advance the collective knowledge and, therefore, support the growth of individual knowledge. The underlying premise of a learning community is a culture of learning in which everyone collaborates in a collective effort of understanding. Such a learning community capitalizes upon the diversity of expertise of its members, who contribute knowledge to the benefit of the community.

Rovai & Ponton (2005) define that social community represents the feelings of a community of students regarding their cohesion, spirit, trust, interdependence, and social presence, and learning community represents the feelings of community members concerning the degree to which they share educational goals and the capacity of the classroom community to support learning and educational satisfaction. Constituting learning community is not as straightforward as we imagine. It takes keen observation and appropriate strategy so as to result in anticipated outcomes, e.g., raising learning motivation, enhancing collaborative work. Strong feelings of classroom community increases the flow of information, the availability of support, commitment to group goals, sense of well-being, cooperation among members, and satisfaction with group efforts (Dede, 1996; Wellman & Gulia, 1999). Therefore, the proposition is originated as follows:

P1: Sense of community is positively associated with online participation

“Online continuing education and staff development is on the rise as the benefits of access, convenience, and quality learning are continuing to take shape” (Phillips, 2005, p.77). She went to state that strategies to enhance learning require learner participation that is self-directed and independent, which in turns transforming role of educator from expert to facilitator (Phillips). In a web-based graduate level course, the employment of an online facilitator does not yield substantial effects on cognitive restructuring and learning achievement (Chang, 2006). Similarly at the graduate level, Woods (2002) empirically found that more frequent delivery of instructor-initiated personal (text-only) emails to students, as opposed to less frequent delivery, did not produce more positive perceptions of and participation in the online learning experience. However, for the undergraduate level, Wei & Chen (2006) declared that instructor involvement assists to facilitate online dialogue via discussion forums. Accordingly, young adults seem to be more dependent on instructor facilitation for better online learning performance in comparison to those who are more mature.

P2: Whether instructor intervention affects online learning performance depends on other extraneous factors such as student status
From the proposition two, it is inferred that performance of online learning is associated with learners' life characteristics or experiences. Ross (1996) found that learners’ background knowledge is substantially related with level of online participation.

P3: Performance of online learning is associated with life characteristics or prior experiences

Many researches found that social interaction serves as a vital incentive to stimulate students to participate in and, ultimately, complete the course (i.e., Cronje, J., Adendorff, D. E., Mayer, S. M., & van Ryneveld, L., 2006). In their study of using a survival game to facilitate learning, Cronje et al. also commented that lack of commitment and active participation as well as contrasting personalities and strong individual skills are the main cause of conflict in the study. That is, the main goal of every course design is no other than getting learning activities rolling persistently. The importance of social binding is evident as incentives for active learning.

P4: Interaction is associated with online participation

Utilizing web-based tools for instruction integration is fairly common in both traditional classroom teaching and the blend instruction, not to mention online learning. No matter in what environment, analyzing learning characteristics is essential and inevitable. Rovai & Grooms (2004) state that learning preference is an important factor that accounts for educational outcomes, particularly in online education.

P5: Learning styles or psychological types are substantial factors of online participation
There have been quite a few studies on learners’ motivation for online learning in many different aspects. To define motivation is at least two-fold: intrinsic and extrinsic. The most basic distinction between intrinsic motivation and extrinsic motivation is that intrinsic motivation refers to doing something because it is inherently interesting or enjoyable, and extrinsic motivation refers to doing something because it leads to a separable outcome (Ryan & Deci, 2000). As opposed to extrinsic motivation, intrinsic motivation has been deemed a natural wellspring of learning and achievement that can be systematically catalyzed or undermined by teacher and parent practices (Ryan & Stiller, 1991). Intrinsic motivation has greater likelihood resulting in authentic learning and high-quality creativity. William (2004) specified that one way to give learners an incentive for greater online participation is by grading it. A study (Swan et al., 2003) by Suny Learning Network supports the statement and learners seem quite welcome use of assessment grade on their collaboration and participation in online environment.

P6: Learner motivation accounts for better online participation and its corresponding outcomes

CONCLUSION AND IMPLICATIONS FOR FUTURE USE OF ONLINE LEARNING

The study show that the key factors that influence participation in online learning include sense of community, instructor involvement, life characteristics and prior experiences, interaction, learning styles, and motivation. There may be a reciprocal relationship among those factors. To facilitate high-quality online course, Palloff and Pratt (2003) bring out a simplistic model as the basis for illustrating how the core and custom pedagogies can be implemented. In their model, there are four major cornerstones interdependent with learning communities: effective virtual students, effective course design, effective online facilitator, and lastly effective student support. The way online course designed and structured has significant influences on degree of online participation (Bullen, 1998; Vrasidas & McIsaac, 1999). By examining quite a few evidences for factors influencing online learning, it is plausible to deduce that quality online learning accounts for four major elements: learners, facilitators, course design, and peer support. These ought to occur to promote authentic online learning. Other empirical studies toward different target learners and different contexts report peripheral factors that are also related to online learning. Those peripheral factors, which include computer self-efficacy (Sam, Othman, & Nordin, 2005), computer anxiety (Chua, Chen, & Wong, 1999), attitude toward Internet (Woodrow, 1991), and computer skills (Zhang & Espinoza, 1998) and the like, may be correlated with each other, and associated with the overall performance of online learning.

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