Examining online teaching, cognitive, and social presence for adult students

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ABSTRACT

Drawing on the Community of Inquiry model (Garrison, Anderson, & Archer, 2000), this mixed-method case study examined the nature and interactions of teaching, cognitive, and social presence created by online instructors and adult students in diverse course contexts. The study results indicated online instructional design and teaching elements that are crucial prerequisites for a successful online higher educational experience for adult students. The study also informed e-learning designers on the relations between online teaching, cognitive, and social presence.

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1. Introduction

Research on higher education has been predominantly based in historical perspectives, beliefs, and curriculum of a traditional student profile – that of a person who is 17–22 years old (Kasworm, 1990). However, contemporary higher education reflects increasing diversity from this traditional student profile. As a major grouping, adult students now comprise more than 45% of the current post-secondary population in America (National Center for Education Statistics, 2008), and exhibit significant differences in their academic, psychological, and life involvements from traditional students (Richardson & King, 1998; Schlossberg, Lynch, & Chickering, 1989).

Corresponding to adult students' learning profiles, certain instructional design dimensions, such as collaboration, interactivity, reflection, experiential learning, and sense of community (Eastmond, 1998; Merriam & Brockett, 1997), have been speculated. However, few in-situ studies were conducted to examine the application of those speculations. It also should be noted that research on adult students in higher education has generally examined the issue within face-to-face instructional settings, few studies investigated whether and how an online environment may enhance or reduce the exceptionality of adult students. Research on the interdependence between online instruction and adult students is limited. Therefore, this study examines the nature of online teaching and learning engaged by instructors and adult students in a variety of online course contexts in order to identify effective online design and instruction elements that support a quality learning experience for adult students.

2. Theoretical framework

Following Richardson and King's definition (1998), adult students in this study were the ones who returned to or re-entered their post secondary education at an age of 22 or over, or were enrolling on less than a full-time basis. Through a critical review of adult students' characteristics and representative adult learning theories (i.e., andragogy, self-directed learning, experiential learning, and transformational learning), Cercone (2008) synthesized that high-quality online learning for adults is characterized by: 1) social interaction and collaboration with peers, 2) connecting new knowledge to past experience, 3) immediacy in application, 4) a climate of self-reflection, and 5) self-regulated learning. An integration of these learning elements, as Majeski and Stover (2007) claimed, is *significant,* or *deep* learning (Fink, 2003). According to Majeski and Stover, deep learning is highly collaborative, integrative (synthesizing ideas and facts), self-reflective, and application-centered. Their description of *deep* learning is consistent with the statement of Moon (1999) of learning as a continuum ranging from the stage of *surface learning,* where the learner simply memorizes new ideas, to *deep learning,* where the learner actively integrates new ideas into his or her cognitive structure through learning in a social negotiation environment.

Therefore, in this study *deep* learning was adopted as the disposition of adult students' online learning success. In addition, the researcher of the current study applied the Community of Inquiry model (Garrison, Anderson, & Archer, 2000) as the theoretical lens to

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examine adult students' online learning experience and the nature of online educational environment. This specific model was selected due to the following reasons: (a) this model defines *deep learning* as engaging the whole person – cognitively, socially, and affectively – in the learning process (Garrison et al., 2000; Fink, 2003); (b) the model emphasizes a purposeful and designed educational environment for quality learning experience, and (c) it views a quality learning experience as comprising the learner's personal world (reflective) as well as the shared world (collaborative), which matches the aforementioned adult learning design propositions.

According to Garrison et al. (2000), a successful higher educational experience is embedded within a Community of Inquiry where learning occurs through the interaction of three core elements: cognitive presence, social presence, and teaching presence. Cognitive presence means the extent to which online learners are able to construct meaning and critical thinking through sustained communication. Social presence refers to the ability of individuals to project their personal characteristics into the community, thereby presenting themselves to the other participants as "real people". Teaching presence, in an educational environment, is performed mainly by the instructor. Teaching presence begins before the course commences as the teacher, acting as instructional designer, plans and prepares the course of studies, and it continues during the course, as the instructor facilitates the discourse and provides direct instruction when required. An evaluation of the course hence involves examining indicators of cognitive presence, social presence, and teaching presence.

3. Method

3.1. Research design

The study used a naturalistic case study approach (Stake, 1995) to document online instructors' teaching practice and adult students' online learning experience through a regular school semester. Data was collected through both qualitative and quantitative techniques, including interviewing, artifact analysis of course sites, content analysis of online discussion transcripts, and learning experience survey. Using single- and cross-case analyses, the researcher of the study examined the teaching, cognitive, and social presence for adult students in online courses and the potential relationship between the teaching presence and the other two presences. Four major research questions addressed are: (1) What was the nature of teaching presence in adult-oriented online courses? (2) What were the key features of the teaching presence that adult students identified as supportive for their cognitive and social presence? (3) What was the nature of cognitive and social presence in adult-oriented online courses? (4) What were the relations between teaching, cognitive, and social presence?

3.2. Setting and participants

The participants in this study were the adult students and instructors of ten WebCT-based online courses at a major Hispanic-serving research university in America. The courses ranged in size from 8 to 25 enrolled students, in levels from undergraduate to Doctor's-level classes, and represented disciplines of nursing, education, and business management. These courses shared the following features: 1) adult students were the majority in every course; 2) participation in online discussions was required by the course syllabus and represented more than about 20% of the students' study time; 3) online courses were taught by 8 experienced online instructors (with an average of 5 years' online instruction experience).

Students' demographic data, including age, gender, ethnic status, perceived technology competence level, and perceived competency level with course topics, was collected prior to the study. Students in these courses aged 24–59, with 43 as the mean, with 22% aged 24–29, 48% aged 30–49, and 30% aged 50 and above. Thirty-six percent of the participants were minority (Hispanic and Asian), 60% were female, and 90% rated their confidence level as "above basic" in the use of technology to complete coursework. There was no a significant correlation between students' age and their self-perceived technology competence level and perceived prior-knowledge competency level.

3.3. Data collection and analysis

Data collected from each class included a pre- and post-course interview with the instructor, midterm and end-of-course interview with selected students, end-of-course student surveys, virtual observation of online discussions, and course documents.

3.3.1. Interviews

Instructor interviews were conducted face to face and lasted 45–60 min each. All interviews followed the same semi-structured protocol. The pre-course interview focused on the instructor's previous online instructional experiences, teaching philosophy, course design decisions, and anticipated course events. The post-course interviews collected instructors' impressions of how well the class went, reflections on course events, and plans on future course change or improvement.

Sixteen adult students from the sampled courses were purposely selected for a midterm and an end-of-term interview. These interviewees represented diverse groups of age, gender, ethnic status, and prior online course experiences (with a range of 0–3 years' online learning experience). Interviews were conducted face to face and lasted 30–45 min each. All interviews followed the same semi-structured protocol that focused on students' general online learning perceptions, satisfaction with peer interactions and teaching presence, learning style, time commitment, awareness of intergenerational learning environment, and suggestions for online instruction/learning.

3.3.2. Course documents and observation

Major instructional materials of the sampled courses, including course syllabi, lecture notes, assignment handouts, and class-wide emails, were collected for the researcher to obtain knowledge of the contexts and parameters of students' learning events and see things that students and instructors themselves might not see, or might have been reluctant to discuss (Patton, 1990). Students' online interaction transcripts were archived. For the analysis, six weeks' online interaction transcripts were gathered and coded for each course (two at the second and third school week, two at the midterm, and the other two at the end of the school term). Additionally, virtual observation of students' online participation was recorded in-field notes on a weekly basis. All compelling findings from online documents and virtual observations instigated new questions in interviewing, and vise versa.