Student Perceptions of Cognitive, Social, and Teaching Presence

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Research into the effectiveness of online learning has yielded a number of potential models of online learning effectiveness but no verified theoretical frameworks (Garrison & Arbaugh, 2007). Extensive literature exists related to the Community of Inquiry (CoI) model, first proposed by Garrison, Anderson and Archer (2000) to describe the components of an ideal educational experience. The model consists of three core elements: cognitive presence, social presence and teaching presence. Learning occurs as a function of the interaction of these three elements within a community of students and instructors.

Cognitive presence involves the extent to which the student is able to construct and confirm meaning related to the course content based on sustained reflection and discourse within the community of inquiry. This element is most closely associated with the process and outcomes of critical thinking and may be the most challenging element to facilitate and measure in the online environment. Social presence involves the ability of learners to project themselves as “real” persons, both socially and emotionally into the community of inquiry. This element has been given the most attention of the three presences in research and has been strongly associated with learning outcomes and learner satisfaction. Finally, teaching presence focuses on the design and facilitation of the cognitive and social elements of a course in order to achieve the desired educational outcomes. Teaching presence is achieved through the selection, presentation, organization and design of course content, learning activities and assessments along with facilitation of both cognitive and social presences. A large body of evidence suggests that teaching presence is strongly related to student satisfaction, perceived learning and sense of community (Garrison & Arbaugh, 2007)

Garrison and Arbaugh (2007) cite a number of studies that support the CoI as a theory of online learning but they point to a need for further study. In particular, there is a need for studies that can examine all three elements of the framework simultaneously and with enhanced methodological and analytical rigor. In addition, they call for refinement of the concepts, relationships and interactions both individually and collectively. Much prior research has focused on a particular presence without regard to its relationship to and interaction with the other two presences. Finally, the authors suggest the need for testing the framework across disciplines to establish generalizability and applicability of the framework across disciplines. The focus of most research with the CoI has been general online education with a few studies in defined disciplines such as business and education. To our knowledge, no studies have been done explicitly to examine the CoI model in the context of the health care disciplines.

Shea and Bidjerano (2009) used the same comprehensive instrument in a multi-institutional study for the purpose of further validating the instrument, determining relationships among the three presences, and identifying specific responses that are most likely predictive within the constructs. The initial response of 2605 yielded a workable sample of 2159 students engaged in online courses organized within a single
learning management system. Students represented a range of both age and level within higher education. The study confirmed that not only were the three constructs coherent within the model, there exists among them directional relationships such that teaching presence directly affects both social presence and cognitive presence. Further, the study identified most significantly that students who were more comfortable with online discussions (an indicator of both of social and teaching presence) demonstrated a higher level of cognitive presence. Regardless of the inherent limitations of the study, it nonetheless presents convincing evidence that the instrument and the model it studies, composed of the three interrelated constructs of teaching, social, and cognitive presence, are significant to the design and facilitation of online educational experiences. Additionally, the model articulates the behaviors and processes required to nurture knowledge construction through the cultivation of various forms of “presence” among which are teaching, social, and cognitive presence (Shea & Bidjerano, 2009).

Although the results from the Shea and Bidjerano study supports the CoI framework, it was not clear if the framework is generalizable to other disciplines such as health care. In addition, there remains a lack of data in online health care students about the characteristics of and relations between teaching, social and cognitive presence. Therefore, the purpose of this study is to apply the same instrument used by Shea and Bidjerano in a cohort of students in several online health care programs to determine if similar constructs of presence emerge and to use the data as a baseline evaluation of presence that could guide course design and faculty development in the future.

**Methods**

The sample used in this study was Regis University Rueckert-Hartman College for Health Professions students enrolled in online courses during the Fall 8-wk 2 term of 2009. A link to an online survey was sent to students in Health Services Administration, Nursing, and Transition Doctor of Physical Therapy programs. The data was collected from mid-November to the first week of December, which coincided with the final 3 weeks of the 8-week term. Three automated reminders were sent weekly to students who had not responded to previous requests.

The survey used in this study has been previously validated by Shea & Bidjerano (2009) and included the same 34-item questionnaire along with several demographic questions, such as gender, age, program, and course experience. The data from the online survey was imported into SPSS v. 17 for data analysis, which consisted of descriptive statistics of means and percents for the demographic and questionnaire data. In addition, we replicated as closely as possible the principal axis factoring with Oblimin rotations used by Shea.

**Results**

Of the 716 students eligible to receive the survey, a total of 337 responses where gathered for a 47% response rate. Ninety-one percent of the respondents were female, which was somewhat higher percentage (75%) than in the replicated study. In contrast, 76% of respondents in the current study were over the age of 36 years compared to 29% in that age range reported by Shea. The majority of respondents (63%) in our study had five or more courses while only 14% of respondents from the Shea study had completed five or more courses.

Although the students’ overall perceptions of social, teaching and cognitive presence were very high (over 85% agreement), the areas with the most disagreement amongst respondents related to 1) the value of online communication as an excellent medium for social interaction, 2) the level of comfort in disagreeing with others, and 3) the ability of the instructor to engage students, keep them on task, and develop a sense of community.
Finally, the data from the factor analysis largely confirmed the results reported by Shea & Bidjerano (2009). The three constructs of teaching, social, and cognitive presence were also identified in our data using the same parameters for the analysis used by Shea. However, there were minor differences found in the constructs. In the current study one question (#13) loaded to social presence as compared with the original study where it loaded to teaching presence and question 22 (“Online discussions help me to develop a sense of collaboration”) loaded to cognitive presence rather than social presence in the original study.

Implications

The Community of Inquiry (CoI) model describes the components of an ideal educational experience. The results from our study largely confirm the findings from Shea and Bidjerano (2009) even though the there were several differences in the learner demographics between the two studies, which strengthens the generalizability of the question set that identifies learners’ perceptions of cognitive presence, social presence and teaching presence. Overall the students’ ratings of presence were high, although the areas with lower rates can help inform our future course and program planning. Specifically, we will use the results from this study as a baseline measure as we implement strategies that may improve the areas where student responses indicate areas of potential improvement, namely the value of online communication as an excellent medium of social interaction, the level of comfort in peer disagreement, and the ability of the instructor to engage students and establish a sense of community. Future use of the CoI model will include using the survey in comparisons across programs and in faculty development efforts.

References


About the Presenters

**Tim Noteboom** is Professor and Director of the Department of Post-Professional Studies in the School of Physical Therapy at Regis University in Denver, CO. He developed and implemented an online Doctor of Physical Therapy program that incorporates a wide variety of innovative learning components. He has made several national presentations on Web 2.0 applications in health care and has been an industry consultant in leveraging technology in physical therapy practice.
Lora Claywell is Associate Professor and Faculty Recruiter and Mentor of the Online Nursing Program at Regis University in Denver Colorado, and has been engaged in nursing education for eighteen years. During this time she has successfully engaged in strategic planning, development, administration and teaching in continuing education, associate, baccalaureate, and master’s degree programs in nursing, both campus-based and online. Her textbook, *LPN to RN Transitions*, is in its second edition. Dr. Claywell has presented at several multi-disciplinary national conferences, the most recent being the Annual Conference on Distance Teaching and Learning in 2007, 2008, and 2009.