

# Using the Community of Inquiry Survey to Assess Teaching, Social, and Cognitive Presence and Make Subsequent Improvements to Online Courses

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*Thanks to the growth and development of online programs, higher education is more accessible to prospective students regardless of where they live. The sophistication of online courses has grown over the past decade largely due to the abundance of research. Ongoing research propelled the development of the Garrison, Anderson, and Archer<sup>1</sup> Community of Inquiry (CoI) Model which described the interaction or relationship among teaching presence, cognitive presence, and social presence when designing and teaching online courses.*

The CoI Model is in part rooted in Dewey's<sup>2</sup> early work, which identified the importance of integrating community into the classroom and using dynamic and robust critical inquiry, analysis, and reflection to discover, understand, and apply new concepts and knowledge. With regard to teaching, cognitive, and social presence, Swan et al.<sup>3</sup> defined each presence as follows: „*Social presence* refers to the degree to which learners feel socially and emotionally connected with others in an online environment; *teaching presence* is defined as the design, facilitation, and direction of cognitive and social processes for the realization of personally meaningful and educationally worthwhile learning outcomes; and *cognitive presence* describes the extent to which learners are able to construct and confirm meaning through sustained reflection and discourse”.

The CoI Model has been the subject of numerous studies by researchers in the field of online teaching

and learning. Over the past 10 to 15 years, evidence validating the CoI Model and the CoI Survey has mounted<sup>4</sup>. Early on, much of the research compared online teaching and learning to classroom-based methods – often delineating the strengths or weaknesses of each. Swan<sup>5</sup> indicated, and Grandzol and Grandzol<sup>6</sup> concurred, that researchers need to get beyond the stale comparison of online teaching and learning to classroom teaching and take a more proactive and functional line of research focused on identifying online teaching and learning methods that work best thereby establishing a line of best practices. Within the past seven to ten years, research is transitioning from legitimizing online education and the CoI Model to developing online teaching methods linked to student perceptions of online teaching and learning and academic success<sup>7</sup>.

To that end, Swan<sup>8</sup> identified six best practices to follow when designing and teaching an online class. These practices include (a) establishing clear and concise goals and instructions; (b) using multiple presentations of course content; (c) developing learning exercises or methods that are active and engaging; (d) providing students with as much feedback and clarification as possible; (e) being flexible when it comes to achieving learning goals and outcomes; and (f) providing students with as much mentoring and support as possible. Most of the above best practices require active, experiential, flexible, and supportive teaching methods. The importance of following empirically

<sup>1</sup> D.R. Garrison, T. Anderson, W. Archer, *Critical inquiry in a text-based environment: Computer conferencing in higher education*, „Internet and Higher Education” 2000, Vol. 2, No. 2–3, p. 87–105.

<sup>2</sup> J. Dewey, *Experience and Education*, Collier Books, New York 1938.

<sup>3</sup> K.P. Swan, J.C. Richardson, P. Ice, D.R. Garrison, M. Cleveland-Innes, J.B. Arbaugh, *Validating a measurement tool of presence in online communities of inquiry*, „e-mentor” 2008, No. 2 (24), <http://www.e-mentor.edu.pl/artykul/index/numer/24/id/543>, [15.01.2013].

<sup>4</sup> K. Swan, P. Ice, *The community of inquiry framework ten years later: Introduction to the special issue*, „Internet and Higher Education” 2010, Vol. 13, No. 1–2, p. 1–4.

<sup>5</sup> K. Swan, *Learning effectiveness: What the research tells us*, [in:] J. Bourne, J.C. Moore (eds.), *Elements of Quality Online Education: Practice and Direction*, pp. 13–45, The Sloan Consortium, Needham MA 2003.

<sup>6</sup> J.R. Grandzol, C.J. Grandzol, *Best practices for online business education*, „The International Review of Research in Open and Distant Learning” 2006, Vol. 7, No. 1, <http://www.irrod.org/index.php/irrod/article/view/246/475>, [17.06.2013].

<sup>7</sup> Ibidem; K. Swan, op.cit.

<sup>8</sup> K. Swan, op.cit.

sound best practices when designing and teaching online classes is essential to continuing growth and development of the field.

To utilize and apply research regarding online teaching and design, this author believes that the CoI Model and Survey can be used in a more micro manner to assess student perceptions of teaching, cognitive, and social presence as well as their perceptions of the effectiveness of individual online classes. What follows is this teacher/scholar's attempt to use the CoI Model and Survey to assess and to further improve three graduate, online social service administration classes taught by this author. This study is limited to 24 participants, thereby having little, if any, predictive value. However, the descriptive statistics found in Table 1. and representation of student participant responses to the CoI Survey question 38 (essay) found in Table 2. can point to the strengths and weaknesses of course design and teaching methods.

**Table 1. Descriptive Statistics of 24 Participant Responses to the CoI Survey**

Presence Descrip. Statistics	Teachg.	Social	Cogniti.	Total Col	Ovrall Ratg*
Means	4.70	4.45	4.71	4.62	4.93
Range	3/5	1/5	3/5	3.82/5	4.33/5

\*CoI questions 35, 36, & 37

Table 1. displays the mean ratings and rating ranges for 24 participants. Minimal variability occurred with regard to the Total CoI Survey rating range (3.82 to 5.00) and even less variability occurred between the lowest and greatest overall rating range (4.33 to 5.00). Likewise, little variability was found in participant responses to questions related to teaching and cognitive presence. These ratings ranged from 3.00 (neither agree nor disagree) to 5.00 (strongly agree). The most variability occurred with social presence for which participant ratings ranged from 1.00 (strongly disagree) to 5.00 (strongly agree). A closer review of social presence ratings below 3.00 revealed that one participant rated statement 14 (Getting to know other course participants gave me a sense of belonging in the course) at 1.00 (strongly disagree). Another participant rated statement 15 (I was able to form distinct impressions of some course participants) at 1.00 (strongly disagree) and two other participants rated this question at 2.00 (disagree). With regard to statement 16 (Online or web-based communication is an excellent medium for social interaction), one participant rated this statement at 1.00 (strongly disagree) and another participant

at 2.00 (disagree). Statement 22 (Online discussions help me to develop a sense of collaboration) was rated at 2.00 (disagree).

Table 2. is limited to positive comments. More constructively critical comments will be explored subsequent to Table 2. In addition, Table 2. represents this author's interpretation and coding of student participant comments as they relate to the elements and categories of social, teaching, and cognitive presence and to best practices. In reviewing the comments below, participants often expressed emotion and passion, as well as satisfaction. Even though the instructor's availability was somewhat limited for few weeks, matter-of-fact disclosure of a family death appeared to help student participants know what to expect. One of the challenges of online as well as face-to-face education is to facilitate individualization of teaching methods for learners. In reviewing Table 2., student participants' statements provide evidence that they perceived that individualization of teaching approaches was provided. Facilitation of student interactions is critical to their feeling empowered to participate fully and thus learn experientially and then be able benefit from the experience that fellow students bring to the virtual classroom. Table 2. suggested that students participants appreciated rubrics and concise but clear directions that were identified in the literature as online teaching best practices<sup>9</sup>. Likewise, student participants seemed to ultimately appreciate the challenging course content that was presented using multiple teaching resources such as Blackboard discussion forums, videos illustrating aspects of course content, case scenarios requiring student participants to apply what they were learning, and the Blackboard journal which required them to reflect on what they were learning. In addition, the instructor helped student participants move deeper into course content by using Socratic questioning. Finally, student participants seemed to move through cognitive presence by moving through stages of learning as articulated by Garrison, Anderson and Archer<sup>10</sup> and further developed by Akyol and Garrison<sup>11</sup>.

As noted above, four student participant comments reflected a more constructively critical overview of the social service administration online classes. For example, one student participant indicated that „there are [were] times when I felt that I would learn more if the class was blended with some classroom activities. Other times, it is difficult for me to process all the information without hands-on [face-to-face] learning”. Some students simply feel more comfortable with the traditional classroom setting and have difficulty transitioning to totally online classes. Still, faculty needs to do the best job they

<sup>9</sup> Ibidem.

<sup>10</sup> D.R. Garrison, T. Anderson, W. Archer, op.cit.

<sup>11</sup> Z. Akyol, D.R. Garrison, *The development of a community of inquiry over time in an online course: Understanding the progression and integration of social, cognitive, and teaching presence*, „Journal of Asynchronous Learning Networks” 2008, Vol. 12, No. 3–4, <http://www.eric.ed.gov/PDFS/EJ837483.pdf>, [19.06.2013].

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**Table 2. Participant Responses to Col Survey Question 38 (Essay) as Interpreted as Elements & Categories**

Elements	Categories	Indicators/Student Responses
Social Presence	Emotional Expression	<ul style="list-style-type: none"> <li>I was not at all offended by the slight delay of feedback, as our instructor was open and honest about a family emergency that occurred. <i>EE – Self-Disclosure</i></li> <li>I feel like an individual in Dr. S’s classes. Like someone who has distinct needs and goals that are respected and appreciated. <i>OC-Individualization, Safe Environment</i></li> <li>She [Teacher] cares so much for her students and motivates us to continuously grow and develop into efficient students and human service professionals. Her willingness to help students through each barrier they come across is highly appreciated among students, and I plan to use her leadership style as my own. <i>GC-Mentoring &amp; Support</i></li> <li>She [Teacher] facilitates discussion but encourages students to control the direction of conversation. <i>GC-Facilitation</i></li> </ul>
	Open Communication	
	Group Cohesion	
Teaching Presence	Instructional Management	<ul style="list-style-type: none"> <li>Dr. S. has well designed rubrics and instructions. We know what we are going to be doing all semester on day one. Instructions are clear and concise. <i>IM-Clear &amp; Concise</i></li> <li>She [Teacher] was able to implement course work that really made you think outside the box and do research to help elaborate and follow through on your ideas. <i>BU-Design</i></li> <li>It also brought up practical issues that helped us link and apply what we were learning to real life situations (e.g. jobs). <i>BU-Theory to practice</i></li> <li>The discussion board and questions she asks provoke thought and encourage students to really dive into the material we are learning about. <i>DI-Socratic Questioning &amp; Encouragement</i></li> </ul>
	Building Understanding	
	Direct Instruction	
Cognitive Presence	Triggering Event	<ul style="list-style-type: none"> <li>...At the beginning of this class, i[ ] was very nervous and unsure of what will happen. But from the very first session (introductions), and the subsequent lectures opened up a whole new learning environment which i[ ] found interesting and challenging in a good way. <i>TE-Challenging Course Content</i></li> <li>The course content gave me a different perspective into managing others; learning who I am as a leader helps me to be effective. <i>E-Diverse Presentations of Content</i></li> <li>I appreciated the way the course was presented. This was the first professor who utilized the journal component, and I felt that was a very good way to reflect on the materials at four distinct times during the semester. <i>I-Guided Reflection</i></li> <li>Although the class was quite difficult, it was very enlightening. The content was hard, and I wasn’t sure I would understand it, but when I did, it all fell into place. <i>R-Guided Learning</i></li> </ul>
	Exploration	
	Integration	
	Resolution	

Source: Elements and Categories Taken from: D.R. Garrison, T. Anderson, W. Archer, *Critical inquiry in a text-based environment: Computer conferencing in higher education*, „Internet and Higher Education” 2000, Vol. 2, No. 2–3. p. 89

can to design and teach online classes that are as accessible as possible to these students. Sometimes working with an online coordinator and/or an office of online teaching and research can help to create a more accessible design, projects, and methods.

A second student indicated that, „I just think that sometimes when we are all answering the same question, it is difficult to be creative in responding to peers, especially when a couple of times it seemed some of my peers did not exactly address the questions at hand and made off-handed comments about the material”. Somewhat contradictory to this student’s comment, multiple (two to three) questions were posed in each discussion board and students were given the choice of which one they answer. This student’s comment about off-handed comments and peers not answering questions were helpful and spoke to the importance of the instructor remaining vigilant to student comments. The feedback from this student also speaks to the importance of establishing online etiquette and expectations. Two students had similar comments when they indicated, „I had to work at being

engaged and interested a couple of times, but felt my own drive kept me on task” and „I did find that there were times in which I struggled to be interested in some of my peer’s postings”. Both comments speak to engagement as well as student participants taking more responsibility for their learning.

## Discussion

Teacher self-disclosure, as discussed above, may have served to humanize the instructor and make her more real to students. Although teachers in higher education struggle with the appropriateness and timing of self-disclosure, if done carefully, it has the potential to model ideals inherent to the discipline, which ultimately serve students well. Individualization of student learning needs seemed to help students feel the instructor’s caring about them. Teachers who demonstrate caring about what and how students learn in the virtual classroom have the potential to develop individualized teaching approaches as students and the instructor move

through the semester. Consistent with the findings of Grandzol and Grandzol<sup>12</sup>, continuing research into how students learn in the online classroom may provide a window into more effective course design and delivery, whether focusing on course content, interaction among learners and the instructor, and the pace of learning for both students and the instructor. Consistent with Swan's<sup>13</sup> delineation of online best teaching and design practices, student participant comments and high ratings for teaching and cognitive presence were consistent with presenting the course content in multiple ways, developing learning exercises or methods that are active and engaging, and establishing clear and concise goals and instructions. Evident in student participant comments were assertions that the instructor provided healthy doses of feedback and clarification; flexibility when it came

to learning goals and assignments; and a high level of mentoring and support.

### Conclusions

This author recommends that ongoing research continue to address validating and developing best practices in online teaching and learning. As has occurred in some academic settings, but needs to continue, this author believes that universities, as well as community and private colleges need to establish an office of online teaching and research that support online teaching and research. To ensure that student participants' more critical comments were addressed, this author plans to further develop social presence by providing students with audio/video feedback on select assignments, discussion board posts, and journal entries.

References are available in the online version.

<sup>12</sup> J. R. Grandzol, C.J. Grandzol, op.cit.

<sup>13</sup> K. Swan, op.cit.

## POLECAMY

### European MOOCs Stakeholders Summit 10–12 lutego 2014 r., Lozanna, Szwajcaria

École Polytechnique Fédérale de Lausanne (EPFL) oraz P.A.U. Education zapraszają na drugie spotkanie łączące interesariuszy europejskich kursów MOOC (Massive Open Online Courses). Celem jest wzmocnienie powiązań i synergii pomiędzy europejskimi uniwersytetami w tym obszarze. Tematy, które będą omawiane podczas wydarzenia, to m.in. ocena studentów, akredytacje kursów MOOC, współdziałanie platform oraz wspólne inicjatywy w zakresie badań.

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