

## **Evaluating an Online Professional Learning Community as a Context for Professional Development in Classroom-based Research**

*\* \* \* On the Internet \* \* \**

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### **Abstract**

*This study examines how an online training into teacher research has been evaluated in relation to the three main elements of the community of inquiry framework (CoI): teaching, social, and cognitive presences. We held the online training as a part of TESOL's Electronic Village Online (EVO) and offered a course on how teacher research can be conducted. A survey was administered to elicit the perceptions of 27 volunteering teacher researchers regarding how social, cognitive and teaching presences within the framework of CoI support professional development of teachers, and to examine how CoI presences correlate with overall satisfaction in this research-based professional development online course. In addition to quantitative measures including means, modes and standard deviations, we analysed the data through the Spearman Rank Correlation Coefficient on SPSS to explore the correlation between the degree to which each of the three presences supported these teachers in their professional development. Findings imply that participants held highly positive perceptions towards cognitive, social and teaching presences of CoI and that these different aspects of the framework correlate positively with the overall course satisfaction. Moreover, there are important implications for instructional design of online professional development programs using the CoI framework and maintaining effective online research mentoring practices.*

*Keywords: Online Learning, Community of Inquiry, Social Presence, Cognitive Presence, Teaching Presence, CoI survey, Perceived Learning, EVO, classroom-based research training*

## **Online Professional Development and the Community of Inquiry (CoI) Model**

With the enhanced use of educational technology in online environments, web-based teacher development programs and online professional learning communities (OPLCs) have been accentuated as powerful professional development contexts. Numerous research studies have suggested that web-based teacher development programs have great potential for meaningful professional development since these can bring together motivated and experienced teachers and provide opportunities for collaborative learning, reflection, feedback, and construction of learning communities (Kao, Tsai & Shih, 2014; Zhang, Liu & Wang, 2016).

As an online teacher development program designed within the scope of TESOL's Electronic Village Online (EVO), Classroom-based Research for Professional Development has aimed to construct an OPLC to facilitate the professional development of teachers. Teacher research (TR) is considered as an empowering form of continuous professional development (CPD) since it helps teachers to attain deeper professional knowledge (Atay 2008; Dikilitaş & Mumford, 2016; Gao, Barkhuizen, & Chow 2011), promote collaboration with their colleagues and learners (Atay, 2008; Wyatt 2011), and improve their teaching practice. In an attempt to support teachers in TR, this online program provided teachers from different educational contexts with the opportunity to learn together online, share resources, solve classroom-based problems, and develop research strategies in order to improve their performance through reflection and feedback. The aim of this study is to elicit participants' course evaluation by using the community of inquiry (CoI) model which offers a tool to study online teaching and learning (Garrison, 2006; Garrison & Akyol, 2013; Garrison, Anderson, & Archer, 2010a). The CoI framework consists of three overlapping constructs comprising social presence, cognitive presence, and teaching presence. CoI is used to sustain the quality of online education and this model presumes that there are overlapping relationships between the presences which facilitate "deep and meaningful educational experience" (Arbaugh et al., 2008, p. 134). Thus, focusing on the impact CoI presences may have on one another, the present study examines the correlation between these various presences and learning satisfaction.

### **Literature Review**

Online teaching and learning have been a growing mode of course delivery which involves students and teachers present in diverse locations with access to the same online platform where teaching and learning takes place. Online platforms are seen to nurture communities, where social dynamics, interaction and collaboration interact and support joint knowledge construction and where inquiry occurs through intellectual academic interaction (Garrison, Anderson, & Archer, 2009). One of the models that frame the learning and teaching process in such a context is the community of inquiry model which offers a means to study online teaching and learning (Garrison, 2006). The model involves three fundamental elements of inquiry which characterise how learning and teaching are facilitated online with participants' presences

reflecting engagement and investment in the community. Among these, social presence refers to how learners are socially connected to one another on a personal level (Wicks, Craft, Mason, Gritter, & Bolding, 2015), while cognitive presence refers to how learners process and construct meaning through collaborative inquiry in such a community (Garrison et al., 1999). Entailing the presence of a teacher with the roles of scaffolding, modelling and/or coaching, teaching presence refers to how social and cognitive presences are holistically supported through a pedagogical process involving constructive, collaborative and sustained engagement (Tirado-Morueta et al., 2016).

These triangulated views of inquiry are based on a collaborative constructivist learning experience (Garrison, 2006), which argue for “the integration of reflective and collaborative practice through which meaning is socially constructed and deeper understanding with higher-order learning outcomes is achieved” (Garrison & Vaughan, 2008, p.29). The framework has been embedded in instructional design in both online and blended courses in order to facilitate learning through interdependent components that are elemental for efficient learning: social presence, cognitive presence and teaching presence (Garrison et al., 1999). The model focuses on learning processes from a collaborative, constructivist, and practical inquiry point of view based on multiple presences that support deep and meaningful online learning (Tirado-Morueta et al. 2016).

In this study we investigate how these three elements of inquiry-based online teacher learning are facilitated drawing on a model seen as effective in both pre-service and in-service teacher education (Garrison, 2011). Each presence interacts mutually in a complex way. Social presence, characterised by affection, interaction, and cohesion, supports “a community of learners to minimize feelings of isolation students may feel when learning online” (Wicks et al., 2015, p.54) as long as effective expression, open communication, and group cohesion are achieved. In a community of practice, social presence is an integral part of collaborative online learning in that it reflects a supportive context and meets the socio-emotional aspects of learning as a community (Tirado-Morueta et al., 2016). Research also shows the positive influence of strong social presence on learner motivation and participation (Swan & Shih, 2005), on actual and perceived learning (Joksimović, Gašević, Kovanović, Riecke & Hatala, 2015; Hostetter & Busch, 2006; Kang & Im, 2013), on course and instructor satisfaction (Akyol & Garrison, 2008; Swan & Shih, 2005; Cobb, 2009), and on retention in online courses (Boston et al., 2009; Liu, Gomez, & Yen, 2009; Reio & Crim, 2013).

Once social presence is established in a community, cognitive presence is also facilitated and learners “construct and confirm meaning through sustained reflection and discourse” (Wicks et al., 2015, p.11). Such presence is operationalized through four sub-phases including (a) a *triggering event* (defining and understanding the problem) (b) *exploration* (exploring the issue through discussion and critical reflection), (c) *integration* (constructing meaning from ideas developed through exploration) and (d) *resolution* (applying new knowledge into a real-world context). These pedagogical elements require attentiveness to students’ needs through developing curriculum that caters for the students’ profile, maintaining efficient delivery of content, facilitating learning activities that foster successful learning, providing opportunities for reflection, and collaborative learning (Tirado-Morueta et al., 2016).

Associations between the three components of CoI and their impact on the learning process have been well documented in recent literature. A number of studies (e.g., Akyol & Garrison,

2008; Boston et. al., 2009; Garrison, Cleveland-Innes & Fung, 2010b; Shea & Bidjerano, 2009; Siemens & Conole, 2011) investigated how the three presences interacted and correlated with each other through the use of CoI survey instruments. Akyol and Garrison (2008) suggest that student satisfaction with the online learning experience was significantly influenced by the three presences but that successful learning only correlated with teaching and cognitive presences, excluding social presence. Shea and Bidjerano (2009) validated the direct influence of the teaching presence and indirect social presence on cognitive presence. According to Garrison (2011), teaching presence impacts both cognitive and social presence. Similarly, Garrison et al. (2010b) argued that teaching and social presences affect cognitive presence. Furthermore, certain aspects of teaching presence including instructional design and direct instruction were found to have significant effect on learning outcomes (Kupczynski, Ice, Wiesenmayer & McCluskey, 2010).

The CoI framework has been widely studied in online learning environments with respect to online Communities of Practice (CoPs). Hou (2015) commented that as an online venue providing its participants with opportunities to discuss their practice, eliminate doubts, and seek support from each other, a COP may motivate and engage online participants more effectively in their professional growth. Similarly, recent research studies affirm that active participation in online CoPs can

1. facilitate instructional improvement, self-efficacy and knowledge development among educators and administrators (Vavasseur & MacGregor, 2008),
2. promote and enhance the reflective practices of pre-service teachers (Boulton & Hramiak, 2012; Seddon & Postlethwaite, 2007) and in-service teachers (Hough, Smithey, & Evertson, 2004),
3. enable teachers to transform their perception of professional identity (Trent & Shroff, 2013), deepen teacher knowledge (Tang & Lam, 2014; Wang & Lu 2012),
4. and foster knowledge-sharing behaviours in terms of knowledge giving and knowledge receiving (Tseng & Kuo, 2014).

While the literature has focused on teacher learning in CoI-driven online platforms, there is a dearth of studies exploring the communities of inquiry designed to offer online teacher research courses to language teachers across the world. The online teacher research program that is the focus of this study is well suited to the underlying principles of CoI since the teachers engaged in learning in order to conduct research, drawing on the inquiry driven process and content of the course. To this end, we explore the following research questions:

1. How do perceived social, cognitive and teaching presences within the framework of CoI support professional development of language teachers in an online teacher research training?
2. How do CoI presences correlate with the overall satisfaction with this online teacher research training?

## **Methodology**

## **Research Setting**

The topic of the Classroom-Based Research for Professional Development EVO session was teacher research and the course took participants through different stages of teacher-research, gradually building confidence among participants in how to conduct a classroom-based research study in a practical and realistic way. The course was delivered fully online through the use of asynchronous and synchronous platforms gathering together the geographically dispersed teachers who were interested in this kind of research. All elements contained within the online course itself, website materials, forums, online mentoring, peer-mentoring, and webinars aided the participants to identify a research focus and develop research questions. Participants then considered possible sources of evidence for answering questions and started to design appropriate ways of gathering information. Mentors suggested a variety of ways to analyse and interpret different kinds of evidence that the participants collected in response to their research questions. Consequently, the participants were guided to share their findings in the webinars held in the professional learning community as well as through other forms of innovative means such as online posters and infographics.

## **Participants**

We held this session as a part of TESOL's Electronic Village Online (EVO), which was established in 2000 as a special project of TESOL's CALL Interest Section. The EVO offers five weeks of free professional development sessions in a collaborative online learning environment for educators around the world. and we offered a course on how teacher research can be conducted to 232 participants from different geographical regions including North America, Latin America (Argentina, Brazil, Peru) Africa (Nigeria), Europe (Croatia, Italy, Ukraine), Middle East (Qatar, Saudi Arabia) and Asia-Pacific (Macau, Japan, India). The participants in this study included 27 teachers who voluntarily enrolled in our online professional development course into teachers' research engagement, which was offered as one of the EVO sessions in 2016.

The participants enrolling in our course were mainly full-time teachers with teaching experience ranging from less than 5 years (17%), to 10 years (21%), and more than 10 years (62%). However, many participants (64%) in the pre-course survey reported that they lacked experience in conducting classroom-based research. In addition, the majority of the participants (70%) pointed out that this would be their first online learning experience whereas 30% indicated that they had previously participated in an EVO session or other similar online courses.

## **Data Collection**

Although various models have been proposed for the analysis of online learning, the current study adopts the CoI framework (Garrison et al., 1999) since it provides a dynamic model which fosters the development of community, the pursuit of practical inquiry, higher-order learning (Garrison, 2007; Swan, Garrison & Richardson, 2009), collaborative constructivism, critical reflection, and knowledge construction (Garrison, 2000). The structure of the CoI survey, which we used in this study, has been validated through factor analysis in prior studies (Garrison et al. (2010b); Arbaugh & Hwang, 2006).

To assess participant perceptions of CoI elements that informed our course design, we adopted the CoI survey instrument which was developed by Arbaugh et al. (2008). In addition, based

on Akyol and Garrison (2008), the present study integrated a learner satisfaction item (item 35; see Appendix) to the CoI survey. Our CoI survey entailed 13 items for teaching presence perception, 9 items for social presence perception, 12 items for cognitive presence perception and one item for perceived satisfaction.

The 35-item CoI survey instrument, with a 5-point scale ranging from strongly disagree to strongly agree (1 to 5 on the scale), was administered to EVO participants in our session at the end of the course to explore their perceptions of each CoI presence as well as their perceived satisfaction with the online course.

Although the CoI survey was posted on the course website, in an attempt to evaluate the course throughout the CoI framework, the data were collected upon the completion of the course work.

Overall 232 teachers had originally enrolled for the online course. However, only about 30 participants remained throughout the 5 weeks and completed all the tasks. Among these 30 participants, 27 volunteered to respond to the survey.

### **Data Analysis**

The Likert scale items were analysed by descriptive statistics using the Statistical Package for the Social Sciences (SPSS). Means of items, modes and standard deviations were analysed and reported. In order to examine the associations between different components of the CoI framework, we used the Spearman Rank Correlation Coefficient in SPSS. The reliability of the questionnaire was calculated using Cronbach's alpha which yielded an alpha level of 0.98 ( $\alpha = .98$ ). Since a score of over 0.7 refers to high internal consistency, the results of the analysis of the questionnaire can be considered as reliable.

### **Findings and Discussion**

The first research question in this study aimed at exploring whether participants considered the CoI-based online training into teacher research to be an effective means for their professional development.

Data analysis of participant response on the 5-point Likert-scale (ranging from strongly disagree to strongly agree) yielded mean responses for the 34 items ranging from 3.4 for Item 7 (*I felt comfortable disagreeing with other course participants while still maintaining a sense of trust*) to 4.5 for Item 30 (*The moderators encouraged the participants to explore new concepts in this course*). Standard deviations were highest for Item 26 (S.D.= 1.38) (*The moderators were helpful in identifying areas of agreement and disagreement on course topics that helped me to learn*), indicating a higher level of differences in their perceptions between participant response, and lowest for Item 16 (S.D.= 0.70) (*Combining new information helped me answer questions raised in course activities*), indicating a lower level difference between participant responses.

When considering all respondents' ratings, *Social Presence* items collectively yielded a mean score of 3.79 (SD=1.01). *Cognitive Presence* items collectively yielded a mean score of 3.79 (SD=1.19). *Teaching Presence* items collectively yielded a mean score of 4.09 (SD=1.31). Prior research has concluded that the CoI survey items which rated less than 3.75, or slightly less than agree (4) on average, would not sufficiently be accepted as an effective learning community (Matthews, Bogle, Boles, Day & Swan, 2013). Keeping in mind that standard deviation shows whether response is clustered around a value or response is scattered showing

a higher level of differences in participant responses, the fact that the mean scores of cognitive, teaching, and social presence in this study were above 3.75 indicates positive trends. Consequently, these findings imply that participants reported positive perceptions and remarked that there was an effective learning community in the present study.

**Table 1. Summary of Participant Perceptions towards CoI Presences**

Participant Perceptions towards CoI Presences	Mean	Mode	SD
<b>Questionnaire Items on Social Presence</b>			
1. Sense of belonging	3.6	5	1.34
2. Impression about participants	3.5	4	1.05
3. Social interaction	3.9	5	1.28
4. Comfort for interaction	4.0	5	1.01
5. Comfort in discussion	3.9	4	1.01
6. Comfort in debating	4.0	4	0.90
7. Sense of trust	3.4	3	1.01
8. Gaining Acknowledgement	3.9	4	0.78
9. Sense of collaboration	4.0	4	0.90
<b>Questionnaire Items on Cognitive Presence</b>			
10. Increasing interest	4.2	5	1.01
11. Piquing curiosity	4.3	5	1.27
12. Motivation to explore	4.3	5	1.31
13. Problem exploration	4.0	4	1.19
14. Resolving questions	3.9	4	1.31
15. Appreciating different perspectives	3.7	4	0.98
16. Answering my questions	4.1	4	0.70
17. Constructing explanations	4.3	5	0.98
18. Understanding fundamental concepts	4.0	4	1.22
19. Applying knowledge	3.7	4	1.18
20. Developing solutions	3.8	4	0.93
21. Transferring knowledge	4.3	5	0.98
<b>Questionnaire Items on Teaching Presence</b>			
22. Communicating topic	4.3	5	1.33
23. Communicating goals	4.2	5	1.35
24. Providing instructions	4.3	5	1.29
25. Communicating procedures	4.2	5	1.27
26. Identifying areas	3.9	5	1.38
27. Clarifying thoughts	3.9	5	1.36
28. Engaging in dialogue	4.1	5	1.34
29. Supporting learning	4.2	5	1.32
30. Exploring new concepts	4.5	5	0.98
31. Developing a sense of community	4.2	5	1.04
32. Understanding self	3.8	4	1.27
33. Providing feedback	4.1	5	1.08
34. Regulating discussions	4.1	5	0.99

## Correlations between components of CoI

The CoI Survey aimed at tracing the relationships between presences quantitatively as well as examining the associations between each of the presences and overall satisfaction with the course. In response to the second research question, we first explored the participants' level of satisfaction from the online course and then evaluated whether there was a correlation between levels of satisfaction and each element of the presence. The Spearman Rank Correlation Coefficient was run in order to investigate the relationships between cognitive presence, teaching presence, social presence and perceived satisfaction with the course. As demonstrated in the table below, the analysis yielded significant associations among levels of presences and perceived satisfaction.

**Table 2. Summary of Correlation between CoI Presences and Overall Course Satisfaction**

		Satisfaction	Teaching Presence	Social Presence	Cognitive Presence	
Spearman's rho	Satisfaction	Correlation Coefficient	1.0	.46*	.39*	.51**
		Sig. (2-tailed)	.	.02	.05	.01
		N	27	27	27	27
	Teaching Presence	Correlation Coefficient	.46*	1.00	.76**	.85**
		Sig. (2-tailed)	.02	.	.00	.00
		N	27	27	27	27
	Social Presence	Correlation Coefficient	.39*	.76**	1.0	.81**
		Sig. (2-tailed)	.05	.00	.	.00
		N	27	27	27	27
	Cognitive Presence	Correlation Coefficient	.50**	.85**	.81**	1.0
		Sig. (2-tailed)	.01	.00	.00	.
		N	27	27	27	27
*. Correlation is significant at the 0.05 level (2-tailed).						
**. Correlation is significant at the 0.01 level (2-tailed).						



The Spearman Rank Correlation Coefficient was found to be significant between teaching presence and social presence ( $r=.76, p=.00$ ), between teaching presence and cognitive presence ( $r=.85, p=.00$ ), social and cognitive presences ( $r=.81, p=.00$ ) and between teaching presence and perceived satisfaction ( $r=.46, p=.02$ ). These findings concur with the conception of the CoI by Garrison et al. (2000) since the framework assumes that overlapping relationships, interconnectedness and intersections of all three presences are required for effective learning. In this regard, the correlations between presences resonate with findings of previous research which found positive correlations between instructor teaching presence and student social presence within the context of an online course (Shea et al., 2011).

In addition, the Spearman Rank Correlation Coefficient displayed that perceived level of cognitive and social presences are associated with perceived satisfaction in the course. Positive significant correlation between cognitive presence and perceived satisfaction ( $r=.51, p=.01$ ) as well as social presence and satisfaction ( $r=.39, p=.05$ ), indicated that students who perceived higher levels of teaching, social and cognitive presences also perceived higher levels of satisfaction. This finding aligns with prior research findings which framed teaching presence as a driver for social and cognitive processes to enhance learning outcomes (Kozan, 2016; Ke, 2010).

## Implications

These findings indicate that social, teaching and cognitive aspects of CoI positively correlate with each other. An important implication concerns integration of course content and activities to reinforce this positive correlation when the course content is designed, developed, and implemented so as to embed tasks to reflect the social, cognitive, and teaching presence of the CoI framework. To illustrate, our findings prompted us to design course activities that targeted CoI presences and their elements, as shown in Table 3 below.

**Table 3. Illustration of the Integration of CoI Elements into Course Content**

Online course activities	CoI presences and their elements
<p><i>You &amp; your classroom</i>            Writing a post about one's own classroom and sharing information (e.g. facilities and resources within the class and average number of students in the class) with others.            Discussing similarities and differences between classrooms around the globe.</p>	<p>Social</p> <ul style="list-style-type: none"> <li>● <i>Open communication</i></li> <li>● <i>Group cohesion</i></li> <li>● <i>Personal affective expression</i></li> </ul>
<p><i>Choosing a research focus</i>            Considering some problems related to one's teaching and making a question or questions from it. Sharing one's reflection with the others. Commenting critically and supportively on other participants' questions, suggesting how they could be improved</p>	<p>Cognitive</p> <ul style="list-style-type: none"> <li>● <i>Triggering event</i></li> <li>● <i>Exploration</i></li> <li>● <i>Integration</i></li> <li>● <i>Resolution</i></li> </ul>
<p><i>Research ethics: To do or not to do?</i>            Viewing a variety of open source objects provided</p>	<p>Teaching</p>

by the mentors (videos by experts, articles, publications of teacher research). Responding to questions in the forum. Commenting critically and supportively on other participants' response discussing how ethical research can be promoted.

- *Design and organization*
- *Facilitating discourse*
- *Direct instruction*

In other words, instructional design can be informed by the CoI framework and made to encompass activities and tasks to reinforce the CoI presences and their subsequent elements.

Practically speaking, instruction in an effective online training may target integrating activities that involve exploration of others' ideas, collaboration, and giving and getting feedback to enhance the interaction between social and cognitive presence. In this way, a deliberate effort in instruction to bring about higher levels of cognitive presence would also lead to higher levels of social presence. Stevens and Rice (2016) identified several strategies for teachers to support their learners in online learning environments such as maintaining diligent dialogue, redirecting off-task behaviour into productivity, establishing social presence, crossing boundaries between teachers and learners by using their social presence to exist in each other's worlds, and solving problems pragmatically in collaboration. Tasks and activities of the learning programs can also encourage members of the online community to learn from one another, extending the teaching presence beyond instructors/moderators (Garrison, 2011).

Our findings suggest the reconsideration of the instructional design, structure, and organisation of online professional learning communities, with a deliberate focus on the necessity for meaningful transition of theory into practice. Consequently, the CoI framework and interrelations between its elements can be used as a driver for constructing effective online learning environments. In other words, the CoI framework can be used as an effective teaching learning strategy to build strong teaching, social, and cognitive presences, and to facilitate effective and collaborative online professional learning.

By assessing teachers' evaluation of web-based professional development programs, teacher educators and course designers can gain some insights into their expected outcomes. To illustrate in the present study, our participants revealed highly positive perceptions towards collaborative construction of knowledge in groups. Yet, some items (1,2,7) in the sub-scale of social presence yielded slightly lower mean scores (See Table 1). Facilitating social presence can be challenging in an online professional learning community with members coming from diverse educational backgrounds. These findings indicate that social presence is an elemental factor in satisfaction with learning online. Thus, course designers and educators may consider providing members of the online community with additional knowledge of technology, additional knowledge of interactive online teaching techniques, and incorporating opportunities for ongoing dialogue through forums and group discussions to enrich a shared social identity in an online learning environment. Also, the present findings indicate that teacher educators and instructional designers would benefit from being more attentive to teachers' perceptions of web-based teacher education since there are positive correlations between learning satisfaction and teaching, social, and cognitive presences.

## Conclusion

In demonstrating that the CoI presences studied here statistically correlate with one another and with perceived learning satisfaction, the present study offers a number of conclusions. Our findings highlight that the CoI framework is regarded highly positively within the professional online community in this study. Participants reported strong perceptions regarding CoI elements and their impact on their learning satisfaction. Therefore, instruction within the professional learning community may focus on using social presence as a leverage for enhanced levels of cognitive presence. As discussed by Kozan and Richardson (2014) efforts to enrich social presence may also focus on encouraging higher levels of cognitive presence through social interaction.

The findings of this study may be impacted by the small sample size, which limits strong validity. Therefore, future research can use a larger sample and richer triangulation strategy to strengthen the research outcomes since our study employs the CoI survey only as a means for data collection. In addition, we examined the use of the CoI instrument in the EVO context. We need to gain more insights into how to enhance the quality of online education in a more generalized sense. Future research can explore how the CoI framework is perceived in different online teacher professional learning programs in diverse educational contexts to unveil the effects of and the associations between the CoI presences.

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## References

- Akyol, Z., & Garrison, D. R. (2008). 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*, 12(2-3), 3-23.
- Arbaugh, J.B., & Hwang, A. (2006). Does “teaching presence” exist in online MBA courses? *The Internet and Higher Education*, 9(1), 9-21. <https://doi.org/10.1016/j.iheduc.2005.12.001>
- Arbaugh, J. B., Cleveland-Innes, M., Diaz, S., Garrison, D. R., Ice, P., Richardson, J., Shea, P., & Swan, K. (2008). Developing a community of inquiry instrument: Testing a measure of the community of inquiry framework using a multi-institutional sample. *Internet and Higher Education*, 11, 133–136.
- Atay, D. (2008). Teacher research for professional development. *ELT Journal*, 62(2), 139–147. <https://doi.org/10.1093/elt/cc1053>

- Boston, W., Diaz, S. R., Gibson, A. M., Ice, P., Richardson, J. C., & Swan, K. (2009). An exploration of the relationship between indicators of the community of inquiry framework and retention in online programs. *Journal of Asynchronous Learning Networks*, 13(3), 67–83.
- Boulton, H., & Hramiak, A. (2012). E-flection: The development of reflective communities of learning for trainee teachers through the use of shared online weblogs. *Reflective Practice: International and Multidisciplinary Perspectives*, 13(4), 503-515. <https://doi.org/10.1080/14623943.2012.670619>
- Cobb, S.C. (2009). Social presence and online learning: A current view from a research perspective. *Journal of Interactive Online Learning*, 8(3), 241-254.
- Dikilitaş, K., & Mumford, S.E. (2016). Supporting the writing up of teacher research: Peer and mentor roles. *ELT Journal*, 70(4), 371–381. <https://doi.org/10.1093/elt/ccw014>
- Gao, X., Barkhuizen, G., & Chow, A. (2011). Research engagement and educational decentralisation: Problematising primary school English teachers' research experiences in China, *Educational Studies*, 37(2), 207-219. <https://doi.org/10.1080/03055698.2010.506338>
- Garrison, D.R. (2000). Theoretical challenges for distance education in the 21st century: A shift from structural to transactional issues. *International Review of Research in Open and Distance Learning*, 1(1), 1–17. <https://doi.org/10.19173/irrodl.v1i1.2>
- Garrison, D. R. (2006). Online collaboration principles. *Journal of Asynchronous Learning Networks*, 10(1), 25-34.
- Garrison, D.R. (2007). Online community of inquiry review: Social, cognitive, and teaching presence issues. *Journal of Asynchronous Learning Networks*, 11(1), 61-72.
- Garrison, D.R. (2011). *E-Learning in the 21st century: A framework for research and practice* (2nd ed.). Routledge.
- Garrison, D. R., & Akyol, Z. (2013). The community of inquiry theoretical framework. In M. G. Moore (Ed.), *Handbook of Distance Education* (pp. 104–119). Routledge.
- Garrison, D. R., Anderson, T., & Archer, W. (1999). Critical inquiry in a text-based environment: Computer conferencing in higher education. *The Internet and Higher Education*, 2(2-3), 87–105. [https://doi.org/10.1016/S1096-7516\(00\)00016-6](https://doi.org/10.1016/S1096-7516(00)00016-6)
- Garrison, D.R, Anderson, T., & Archer, W. (2009). Critical thinking, cognitive presence, and computer conferencing in distance education. *American Journal of Distance Education*, 15(1), 7–23. <https://doi.org/10.1080/08923640109527071>
- Garrison, D. R., Anderson, T., & Archer, W. (2010a). The first decade of the community of inquiry framework: A retrospective. *The Internet and Higher Education*, 13, 5–9. <https://doi.org/10.1016/j.iheduc.2009.10.003>
- Garrison, D.R., Cleveland-Innes, M., & Fung, T.S. (2010b). Exploring causal relationships among teaching, cognitive and social presence: Student perceptions of the community of inquiry framework. *Internet and Higher Education*, 13, 31–36. <https://doi.org/10.1016/j.iheduc.2009.10.002>
- Garrison, D.R., & Vaughan, N.D. (2008). *Blended Learning in Higher Education*. Jossey-Bass.

- Hostetter, C., & Busch, M. (2006). Measuring up online: The relationship between social presence and student learning satisfaction. *Journal of Scholarship of Teaching and Learning*, 6(2), 1-12.
- Hou, H. (2015). What makes an online community of practice work? A situated study of Chinese student teachers' perception of online professional learning. *Teacher and Teacher Education*, 46, 6-16. <https://doi.org/10.1016/j.tate.2014.10.005>
- Hough, B., Smithey, M., & Evertson, C.M. (2004). Using computer-mediated communication to create virtual communities of practice for intern teachers. *Journal of Technology and Teacher Education*, 12(3), 361-386.
- Joksimović, S., Gašević, D., Kovanović, V., Riecke, B.E., & Hatala, M (2015). Social presence in online discussions as a process predictor of academic performance. *Journal of Computer Assisted Learning*, 31(6), 638-654.
- Kang, M., & Im, T. (2013). Factors of learner-instructor interaction which predict perceived learning outcomes in online learning environments. *Journal of Computer Assisted Learning*, 29(3), 292-301.
- Kao, C. P., Tsai, C.C., & Shih, M. (2014). Development of a survey to measure self-efficacy and attitudes toward web-based professional development among elementary school teachers. *Educational Technology & Society*, 17(4), 302–315.
- Ke, F. (2010). Examining online teaching, cognitive, and social presence for adult students. *Computers & Education*, 55, 808–820. <https://doi.org/10.1016/j.compedu.2010.03.013>
- Kozan, K. (2016). A comparative structural equation modeling investigation of the relationships among teaching, cognitive and social presence. *Online Learning*, 20(3), 210 – 227. <http://dx.doi.org/10.24059/olj.v20i3.654>
- Kozan, J., & Richardson, J.C. (2014). Interrelationships between and among social, teaching, and cognitive presence. *Internet and Higher Education*, 21, 68-73. <https://doi.org/10.1016/j.iheduc.2013.10.007>
- Kupczynski, K., Ice, P., Wiesenmayer, R., & McCluskey, F. (2010). Student perceptions of the relationship between indicators of teaching presence and success in online courses. *Journal of Interactive Online Learning*, 9(1), 23-43.
- Liu, S., Gomez, J., & Yen, C. (2009). Community college online course retention and final grade: Predictability of social presence. *Journal of Interactive Online Learning*, 8(2), 165-182.
- Matthews, D., Bogle, L., Boles, E., Day, S., & Swan, K. (2013). Developing communities of inquiry in online courses: A design-based approach. In Z. Akyol, & D. R. Garrison (Eds.), *Educational Communities of Inquiry: Theoretical Framework, Research and Practice* (pp. 490–508). IGI Global.
- Reio, T., & Crim, S.J. (2013). Social presence and student satisfaction as predictors of online enrollment intent. *American Journal of Distance Education*, 27(2), 122-133. <https://doi.org/10.1080/08923647.2013.775801>

- Seddon, K., & Postlethwaite, K. (2007). Creating and testing a model for tutors and participants to support the collaborative construction of knowledge online. *Technology, Pedagogy and Education*, 16(2), 177-198.
- Shea, P., & Bidjerano, T. (2009). Community of inquiry as a theoretical framework to foster “epistemic engagement” and “cognitive presence” in online education. *Computers and Education*, 52(3), 543–553. <https://doi.org/10.1016/j.compedu.2008.10.007>
- Shea, P., Gozza-Cohen, M., Uzuner, S., Mehta, R., Valtcheva, A. V., & Hayes, S. (2011). The community of inquiry framework meets the SOLO taxonomy: A process-product model of online learning. *Educational Media International*, 48(2), 101–113. <https://doi.org/10.1080/09523987.2011.576514>
- Siemens, G., & Conole, G. (2011). Connectivism: Design and delivery of social networked learning. *International Review of Research in Open and Distance Learning*, 12, 1–5.
- Stevens, M., & Rice, M.F. (2016). Inquiring into presence as support for student learning in a blended learning classroom. *Journal of Online Learning Research*, 2(4), 447-473.
- Swan, K., Garrison, D. R., & Richardson, J. C. (2009). A constructivist approach to online learning: The community of inquiry framework. In Payne, C. R. (Ed.) *Information Technology and Constructivism in Higher Education: Progressive Learning Frameworks* (pp. 43-57). IGI Global.
- Swan, K., & Shih, L. F. (2005). On the nature and development of social presence in online course discussions. *Journal of Asynchronous Learning Networks*, 9(3), 115-136.
- Tang, E., & Lam, C. (2014). Building an effective online learning community (OLC) in blog-based teaching portfolios. *Internet and Higher Education*, 20, 79-85. <https://doi.org/10.1016/j.iheduc.2012.12.002>
- Tirado-Morueta, R., Hernando-Gómez, Á., & Aguedad-Gómez, J. (2016). The capacity of elderly citizens to access digital media in Andalusia (Spain). *Information, Communication and Society*, 19, 1427-1444.
- Trent, J., & Shroff, R.H. (2013). Technology, identity, and community: The role of electronic teaching portfolios in becoming a teacher. *Technology, Pedagogy and Education*, 22(1), 3-20.
- Tseng, F. C., & Kuo, F.Y. (2014). A study of social participation and knowledge sharing in the teachers’ online professional learning community. *Computers and Education*, 72, 37-47. <https://doi.org/10.1016/j.compedu.2013.10.005>
- Vavasseur, J.B., & MacGregor, S.K. (2008). Extending content-focused professional development through online communities of practice. *Journal of Research on Technology in Education*, 40(4), 517-536.
- Wang, Q., & Lu, Z. (2012). A case study of using an online community of practice for teachers’ professional development at a secondary school in China. *Learning, Media and Technology*, 37(4), 429-446. <https://doi.org/10.1080/17439884.2012.685077>
- Wicks, D.A., Craft, B.B., Mason, G.N, Gritter, K., & Bolding, K. (2015). An investigation into the community of inquiry of blended classrooms by a faculty learning community. *Internet and Higher Education*, 25, 53-62. <https://doi.org/10.1016/j.iheduc.2014.12.001>

Wyatt, M. (2011). Teachers researching their own practice. *ELT Journal*, 65(4), 417–425.  
<https://doi.org/10.1093/elt/ccq074>

Zhang, S., Liu, Q. & Wang, Q. (2016). A study of peer coaching in teachers' online professional learning communities. *Universal Access in the Information Society*, 16, 337–347.  
<https://doi.org/10.1007/s10209-016-0461-4>

## APPENDIX

### CoI Survey

#### PART I: Participant perceptions towards CoI presences

<b>Social Presence</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1. Getting to know other course participants gave me a sense of belonging in the course.					
2. I was able to form distinct impressions of some course participants.					
3. Online or web-based communication is an excellent medium for social interaction.					
4. I felt comfortable conversing through the online medium.					
5. I felt comfortable participating in the course discussions.					
6. I felt comfortable interacting with other course participants.					
7. I felt comfortable disagreeing with other course participants while still maintaining a sense of trust.					
8. I felt that my point of view was acknowledged by other course participants.					
9. Online discussions help me to develop a sense of collaboration.					
<b>Cognitive Presence</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
10. Issues posed in class research increased my interest in the content of this online training.					

11. Course activities piqued my curiosity.					
12. I felt motivated to explore content related questions.					
13. I used a variety of information sources to explore problems posed in this course.					
14. Brainstorming and finding relevant information helped me resolve content related questions.					
15. Discussing course content with other participants was valuable in helping me appreciate different perspectives.					
16. Combining new information helped me answer questions raised in course activities.					
17. Learning activities helped me construct explanations/solutions.					
18. Reflection on course content and discussions helped me understand fundamental concepts in class research.					
19. I can describe ways to test and apply the knowledge created in this course.					
20. I have developed solutions to classroom-based research problems that can be applied in practice.					
21. I can apply the knowledge created in this course to my work or other non-class related activities.					
<b>Teaching Presence</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
22. Moderators clearly communicated important course topics.					
23. The moderators clearly communicated important course goals.					
24. The moderators provided clear instructions on how to participate in course learning activities.					
25. The moderators clearly communicated important due dates/time frames for learning activities.					
26. The moderators were helpful in identifying areas of agreement and disagreement on course topics that helped me to learn.					



27. The moderators were helpful in guiding the class towards understanding course topics in a way that helped me clarify my thinking.					
28. The moderators helped to keep participants engaged and participating in productive dialogue.					
29. The moderators helped keep the participants on task in a way that helped me learn.					
30. The moderators encouraged the participants to explore new concepts in this course.					
31. Actions of the moderators reinforced the development of a sense of community among course participants.					
32. The moderators provided feedback that helped me understand my strengths and weaknesses.					
33. The moderators provided feedback in a timely fashion.					
34. The moderators helped to focus discussion on relevant issues in a way that helped me to learn.					

## **PART II: Evaluation of your satisfaction with the course**

How satisfied are you with this session? Would you recommend it to others?

1. Extremely dissatisfied / would definitely not recommend
2. Dissatisfied / would probably not recommend
3. Satisfied / would probably recommend
4. Extremely satisfied / would definitely recommend

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