

Social presence in the 21st century: An adjustment to the Community of Inquiry framework

Alejandro Armellini and Magdalena De Stefani

Alejandro Armellini is the director of the Institute of Learning and Teaching in Higher Education at the University of Northampton, UK. His research focuses on learning innovation, online pedagogy, course design in online and blended learning environments, institutional capacity building and open practices. Magdalena De Stefani obtained her MEd in English Language Teaching in 2005 and completed her PhD in Education in 2012, both at the University of Manchester, UK. She is currently Head of Pre- and Primary School at Ivy Thomas Memorial School in Uruguay and is also a Lecturer in Research Methods at Universidad ORT Uruguay. Since 2013, she has been a member of the Uruguayan National Network of Researchers (ANII, Sistema Nacional de Investigadores). Her research interests include blended learning, practitioner research in TESOL and teacher identity. Address for correspondence: Prof. Alejandro Armellini, Institute of Learning and Teaching in Higher Education, University of Northampton, Park Campus, Boughton Green Road, Northampton NN2 7AL, UK. Email: Ale.Armellini@northampton.ac.uk

Abstract

The Community of Inquiry framework, originally proposed by Garrison, Anderson and Archer, identifies teaching, social and cognitive presences as central to a successful online educational experience. This paper presents the findings of a study conducted in Uruguay between 2007 and 2010. The research aimed to establish the role of cognitive, social and teaching presences in the professional development of 40 English language teachers on continuous professional development programmes delivered in blended learning settings. The findings suggest that teaching presence and cognitive presence have themselves “become social.” The research points to social presence as a major lever for engagement, sense-making and peer support. Based on the patterns identified in the study, this paper puts forward an adjustment to the Community of Inquiry framework, which shows social presence as more prominent within the teaching and cognitive constructs than the original version of the framework suggests.

Introduction

The Community of Inquiry (CoI) framework, originally proposed by Garrison, Anderson and Archer (Garrison, Anderson & Archer, 2000), reflects “the dynamic nature of higher-order learning,” thus becoming an essential guide to research and practice in online education (Garrison & Arbaugh, 2007). The framework, as defined by Garrison, Anderson and Archer (2001, p. 92), is based on a “collaborative constructivist” view of teaching and learning, associated with the work of John Dewey (1938) and his identification of the principles of interaction and continuity. Garrison *et al* (2001) state that it is through such interaction that ideas are communicated and knowledge is constructed, while it is through continuity that the foundations for future learning are laid.

Within the CoI model shown in Figure 1, Garrison and Anderson (2003) identify teaching, cognitive and social presences as central to a successful online educational experience. Teaching presence is defined as “the design, facilitation and direction of cognitive and social processes for the purpose of realising personally meaningful and educationally worthwhile outcomes” (Anderson, Rourke, Garrison & Archer, 2001). This definition involves the structuring and direction of activities, but also entails the modelling of critical discourse and reflection.

Practitioner Notes

What is already known about this topic

- The Community of Inquiry (CoI) framework offers a well-established approach to the online and blended educational experience.
- Social, teaching and cognitive presences interact with each other in a variety of ways.
- In particular, social presence, both as a separate construct and as a component of the other two, requires more detailed articulation in 21st-century blended and online learning.

What this paper adds

- Social presence has evolved since the publication of the original CoI framework, as have the ways in which social presence interacts with teaching and cognitive presences.
- Social presence can be a major lever for engagement, sense-making and peer support in online and blended learning. Both teaching presence and cognitive presence have “become social.”
- This paper presents an alternative representation of the CoI framework, on the basis of social presence being central to higher-order thinking in 21st-century online learning and teaching.

Implications for practice and/or policy

- Social presence has become a pervasive construct, embedding itself in teaching presence and cognitive presence, with implications for online and blended course design and delivery.
- Social presence plays a central role in the construction of meaningful teaching and cognitive discourse.
- The promotion of social presence in online learning does not *per se* generate enhanced cognition.

Cognitive presence is defined as “the extent to which the participants in any particular configuration of a community of inquiry are able to construct meaning through sustained communication” (Garrison *et al.*, 2001, p. 89). Cognitive presence is the manifestation of learners’ pathways towards higher-order thinking.

Social presence is defined as “the ability of participants in a community of inquiry to project themselves socially and emotionally, as ‘real’ people (ie, their full personality), through the medium of communication being used” (Garrison *et al.*, 2000, p. 94). They maintain that social presence contributes to enhancing and sustaining cognitive presence.

Several studies have focused on the nature of social presence and the need to review the original definition. Kreijns, Van Acker, Vermeulen and van Buuren (2014) argue that social presence should be divided into two constructs, namely social presence, or “the degree of ‘realness’ of the other in the communication,” and social space, described as the “degree to which social interpersonal relationships are salient” (Kreijns *et al.*, 2014, p. 5). Garrison and his colleagues have also admitted that “of the three presences, social presence has evolved the most from the original conceptualization. The original definition was largely a socio-emotional construct and did not reflect the full complexity of this concept in establishing a purposeful educational community” (Garrison, 2009, p. 352). To account for such reconceptualisation, Garrison (2009, p. 352) suggests a new definition that emphasises the “progressive” nature of the construct: “the ability of participants to identify with the community (eg, course of study), communicate purposefully

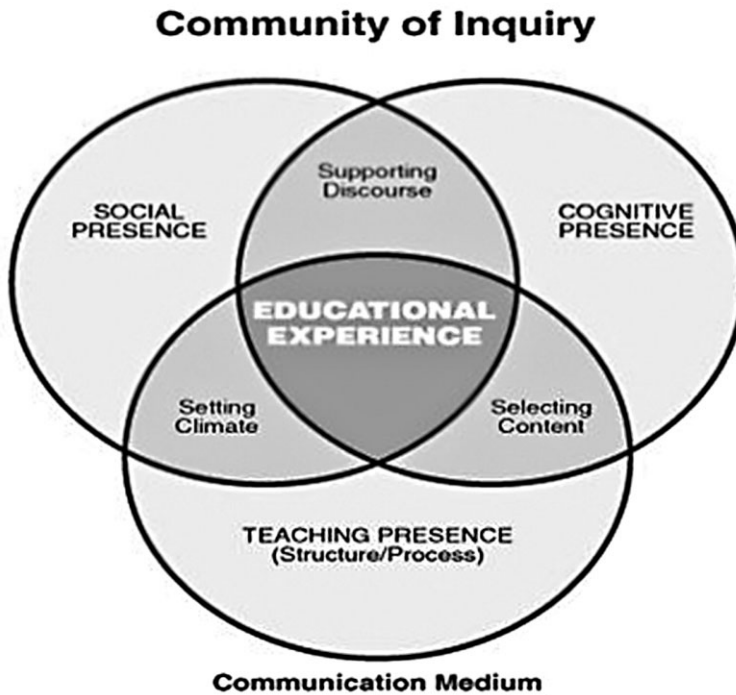


Figure 1: The Community of Inquiry framework (Garrison et al, 2000)

in a trusting environment, and develop inter-personal relationships by way of projecting their individual personalities.” It is based on this conceptualisation that the CoI was developed.

The framework shows the three presences as interrelated (Figure 1). In the quest for collaborative inquiry, social presence becomes a responsibility of teaching presence and a prerequisite for the occurrence of cognitive presence (Garrison, Cleveland-Innes & Fung, 2010, p. 32). Social presence can thus be seen as a mediating variable between teaching presence and cognitive presence.

In this paper, we present evidence to suggest that social presence, as evidenced in online exchanges between participants, may be conceptualised as a core component of both the teaching and cognitive constructs. Our research points to social presence as a major lever for engagement in CoI activity, sense-making and peer support. We propose an alternative representation of Garrison *et al*'s (2000) CoI framework on the basis of social presence being central to higher-order thinking in 21st-century online learning and teaching.

The overlap between the presences in the CoI model

The CoI framework is rooted in a critical thinking tradition that lies outside online learning, and has sought to shed light on cognitive activity as well as on the relationship between interaction and learning (Bloom, Engelhart, Furst, Hill & Krathwohl, 1956; Dewey, 1938; Lipman, 1991). Drawing on Lipman's (1991) idea of a CoI, Garrison and Anderson maintain that a successful educational experience is one in which learners reach the highest levels of cognitive learning: “a community of learners is an essential, core element of an educational experience when higher-order learning is the desired learning outcome” (Garrison & Anderson, 2003, p. 19). These authors understand higher-order learning to involve higher-order thinking that is “conceptually rich, coherently organized and persistently exploratory” (Lipman, 1991, p. 19 in Garrison & Anderson, 2003, p. 19), which assumes a move through different levels of cognitive processing:

remembering, understanding, applying, analysing, evaluating and creating (Krathwohl, 2002, p. 216). This understanding of higher-order thinking (eg, Akyol & Garrison, 2010, p. 237; Rourke & Kanuka, 2009, p. 33) can be traced back to Bloom's taxonomy of learning domains (Bloom *et al*, 1956).

The social dimension within teaching presence

In the digital age, the social aspects of the educational process have become an essential component in the educational experience, to the extent that learners themselves can at times become instructors. Rourke and Anderson (2002) conducted a study in which students in an online course were asked to lead online discussions. Results indicate that students seemed to benefit from observing the practices of their peers, including those who took on the role of discussion leaders. They perceived their peers to be as efficient as course instructors. Stodel, Thompson and MacDonald (2006) question, however, whether learners are competent enough to take on this role and whether they are in a position to promote higher-order thinking.

The prominence of the social aspects of online learning suggests that social presence is a substantive part of the participants' and tutors' online behaviour.

The instructor role is a highly intricate one. According to Davis and Roblyer (2005, p. 406), there are four clearly different roles (counsellor, assistant, teacher and designer), each calling for the development of specific competences. This view is in line with that of Shea *et al* (2014), who argue that despite the fact that participants can act as instructors at times, there are fundamental ways in which the role of the participant and that of the instructor will continue to differ. Bull *et al* (2007) further suggest that effective instructors in an ever-changing educational setting need to constantly create and maintain a balance between content, pedagogy and technology.

The social aspects of the teaching role have been found to be significant: "the perceived presence of instructors may be a more influential factor in determining student satisfaction than the perceived presence of peers" (Swan & Shih, 2005, p. 115). Studies by Shea and Bidjerano (2009) and Garrison *et al* (2010) point to the centrality of the role of teaching presence in establishing and sustaining a CoI as described by Garrison *et al* (2000). This "community building" is very much rooted in the social aspects of the tutor's behaviour.

Some studies have suggested that social presence is not a separate construct, but a core element within the teaching dimension. Social presence in tutor discourse has not been isolated from teaching and cognitive presences (Swan & Shih, 2005). Shea, Hayes and Vickers (2010) studied how tutor social presence relates to the development of students' social presence and cognitive presence. They concluded that there is a strong correlation between the tutor's teaching presence and participants' social presence, implying that a "visible" tutor means more socially active participants. This tighter link is central to cognitive achievement.

The social dimension within cognitive presence

Many studies have highlighted the importance of the social dimension in cognitive activity that leads to higher-order learning. The link between the cognitive and the social is referred to in Akyol and Garrison (2011) and Garrison and Akyol (2013), who view metacognition as a cognitive ability that is both socially situated and socially constructed, rather than a private internal activity.

Swan *et al* (2008, in Garrison *et al*, 2010) question whether social presence is necessarily a precursor of cognitive presence. Annand (2011) re-examines the relationship between social and cognitive presence, and states that social presence does not have a significant impact on cognitive presence. This is presented as a critique to the sociocultural perspective that originally framed the CoI model. However, Annand (2011) is implicitly questioning the existence of social presence as an independent construct, citing other authors such as Kupczynski, Ice, Wiesenmayer and

McCluskey (2010) and Shea *et al* (2010), who maintain that “. . . the social presence construct is somewhat problematic and requires further articulation and clarification if it is to be of use to future researchers seeking to inform our understanding of online teaching and learning” (Shea *et al*, 2010, p. 17).

Kanuka, Liam and Laflamme (2007) argue that there is a marked improvement in the quality of online discussions as well as an enhancement of the cognitive dimension when tasks include a clear social element and participants are assigned roles and responsibilities. This view suggests that social presence may not be conceptualised as a discrete construct in itself but a fundamental component of cognitive presence that enables participants to achieve higher-order learning outcomes. Indeed, Stodel *et al* (2006) conclude that the three presences are not distinct dimensions and call for further research to gain a deeper understanding of how they interrelate.

The study

This paper is based on an action research study conducted in Uruguay between November 2007 and November 2010, which aimed to establish the role of cognitive, social and teaching “presences” (Garrison *et al*, 2000) in the professional development of English language teachers on continuous professional development (CPD) programmes delivered in blended learning settings (Donnelly, 2006; Hughes, 2007; Matzat, 2013; Motschnig-Pitrik & Standl, 2013; Motteram, 2006; Rovai & Jordan, 2004; Thornton & Yoong, 2011). This paper focuses on social presence as evidenced in participant–participant and participant–tutor online exchanges. The research focused on answering the following question:

What roles do cognitive, social and teaching “presences” (Garrison *et al*, 2000) play in the professional development of language teachers in blended learning settings?

A group of 40 English language teachers (38 female, 2 male) voluntarily enrolled in this CPD programme. They were part of the approximately 300 teachers who work for a language school with branches across provincial Uruguay, and were based across 7 of the 18 provinces outside the capital. None of them had been formally trained as teachers, although all of them had previously been involved in CPD programmes. None of them had any experience of online or blended learning at the time. Thirty-six described themselves as digitally literate. Connectivity was not standard across all provincial areas, although it improved as the course progressed.

In this research, “blended learning” consisted of a combination of monthly face-to-face sessions on teaching methodology in conjunction with a structured space on the Moodle virtual learning environment. The purpose of the face-to-face sessions, which were facilitated by one of the researchers, was to offer input on language teaching methodology and promote reflection. The online component of the programme enabled and promoted focused participant–tutor and peer communication in the form of public forum postings and private messages. The Moodle environment was divided into sections, each related to a different methodology issue in Teaching English to Speakers of Other Languages as suggested by participants (eg, teaching writing skills, teaching with technology, improving pronunciation). Moodle thus offered three key functions: it constituted a repository of resources for English language teaching, offered a space for participants to experiment with the creation of their own online teaching artefacts and provided a safe online environment for participants to exchange ideas.

From 2009, the Moodle space incorporated sub-domains for participants and their students, which enabled them to develop their own lesson plans and learning materials. This addition constituted an opportunity for participants to experience the online component of the programme not only as course participants but also as teachers.

Research methods

This action research project started in November 2007 with a needs analysis, which informed the design of three iterations of the online course: April to November 2008, April to November 2009

and April to November 2010. This paper reports on the results of the online participant–tutor and peer exchanges in the Moodle environment. Multiple data sources were used to gather information on the blended learning experience, as detailed in Table 1.

During the three programme iterations, the tutor and participants' online exchanges were analysed deductively using the CoI's teaching, social and cognitive dimensions, each with their sub-categories, as shown, with sample data excerpts from the study, in Tables 2–4. In order to answer the research question, the researchers used the original indicators developed by Garrison *et al* (2000). This was done with a view to exploring whether the original framework was appropriate to this context.

This qualitative study described and theorised about teaching and learning practices in order to construct an in-depth understanding of the context and the interactions within it. The data analysis process occurred as a combination of deductive (theory-driven) and inductive (data-driven) analyses (Fereday & Muir-Cochrane, 2006). In this paper, we focus on the analysis of participant and tutor discourse, which consisted of allocating the data from the online exchanges to the pre-defined teaching, social and cognitive presence categories (Tables 2–4). Rather than quantify the occurrence of each presence (Garrison *et al*, 2001), salience was assessed on the grounds of repetition and pervasiveness across the different data sources. Triangulation between the multiple data sources was conducted on a systematic basis. The researchers also engaged in peer debriefing as a form of audit.

Table 1: Data sources

2008	2009	2010
38 participants	36 participants	40 participants
96 emails	126 emails	71 emails
2 questionnaires (100% response rate)	4 questionnaires (98% response rate)	2 questionnaires (96% response rate)
15 assignments	10 assignments	9 assignments
6 sets of 38 reflective commentaries written post-face-to-face sessions	Online exchanges Creation and sharing of online teaching materials	Online exchanges Creation and sharing of online teaching materials

Table 2: CoI social presence categories and indicators

Social presence categories	Indicators	Illustrative quotations
Affective	Expression of emotions, use of humour, self-disclosure	I also worked at Town B high school for 18 years, but I gave up teaching two years ago, because I was short of time and I have two little boys aged 11 and 9.
Open communication	Continuing a thread, quoting from others' messages, referring explicitly to others' messages, asking questions, complimenting, expressing appreciation, expressing agreement	I was wondering if you would like to keep our children in touch through the internet since most of my students love being in contact with other students and it's a form of motivation for them. What do you think?
Cohesive	Vocatives, inclusive pronouns to refer to group, phatics and salutations	Ok, I could go on and on but I believe this is just enough. I hope to learn about more people. Bye

Table 3: *CoI teaching presence categories and indicators*

<i>Teaching presence categories</i>	<i>Indicators</i>	<i>Illustrative quotations</i>
Instructional design and organisation	Setting curriculum, designing methods, establishing time parameters, utilising medium effectively, establishing netiquette, making macro-level comments about course content	There are a few of you who have not entered the site, and I have just found out that after some time the accounts expire. So if you have never yet had the chance to visit, maybe you can give it a try so that your account stays active.
Facilitating discourse	Identifying areas of agreement/disagreement, seeking to reach consensus/understanding, encouraging/acknowledging/reinforcing student contributions, setting climate for learning, prompting discussion, assessing the efficacy of the process	Thank you, Luis and Juliana, for the very interesting ideas. I agree with both of you. One the one hand, as Luis has very well put it, we must investigate each particular case and see what works for those students.
Direct instruction	Present content/questions, focus discussion, summarise discussion, confirm understanding through assessment and feedback, diagnose misconceptions, inject knowledge from diverse sources, responding to technical concerns	Hi Caro Do this: in your word file (I'm assuming you have Word 2003) 1. Tools >> Track changes By having clicked this any changes you make in the text will be highlighted in red.

CoI, Community of Inquiry.

Table 4: *CoI cognitive presence categories and indicators*

<i>Cognitive presence categories (steps)</i>	<i>Indicators</i>	<i>Illustrative quotations</i>
Triggering event	Recognise problem, puzzlement	My purpose for this project is to solve a problem which is to look for techniques in order to help my intermediate-level students to be more creative writers.
Exploration	Divergence, information exchange, suggestions, brainstorming, intuitive leaps	My CH2 students (seven children) are lovely kids between 8 and 11 years old. They are very receptive and manageable. I told them they would have to learn a poem by heart and I was going to film them.
Integration	Convergence, synthesis, solutions	Today after having read a bit about action research I realise that the context is important (I think I have always known that but I believe that now it has become conscious? Could it be?)
Resolution	Apply, test, defend	I don't think our students can increase the responsibility they feel toward each other by sharing their homework in some way and correct each other's assignments.

CoI, Community of Inquiry.

Other tools could have been used to assess the occurrence of the presences, such as the CoI Survey (Aykol & Garrison, 2008). However, at the time of the study, the researchers decided not to present the CoI framework to the participants, in order to avoid leading them to adopt certain behaviours to exemplify the constructs. This precluded the use of the CoI Survey and other

instruments in which the participants themselves had to assess the occurrence of the teaching, social and cognitive presence constructs. In addition, the action research nature of the study involved a deeper approach to studying interactions, for which the perspective offered by a survey on participants' opinions would not have provided the kind of data being sought.

Results and discussion

In this section, we elaborate on why participants' online exchanges do not fit the patterns suggested by previous research into the CoI framework. The analysis evidenced a clear difficulty in assigning the data to the teaching, social and cognitive categories originally developed by Garrison *et al* (2000). The key difficulty lay in respect of social presence: the evidence suggests that the overlap between this construct and the other two differs from what the original framework suggests.

This section is structured on the basis of the three patterns identified during the analysis. The first two suggest that both the teaching and cognitive dimensions of the online exchanges had a major social element, to an extent that had not been accounted for in Garrison, Anderson and Archer's original CoI model (2000). The social activity was embedded in one or both of the other two and therefore difficult to isolate.

The social discourse of participants evidenced significant cognitive activity, often invoking the tutor's teaching presence. From the tutor's responses, it was obvious that the online teaching discourse contained embedded social discourse, which in turn invoked the participants' cognitive presence, as evidenced below. A need to adjust the CoI framework started to emerge: in its original form, the framework does not comfortably accommodate the processes or dynamics encountered in this research setting. The analysis of the online peer exchanges and those between participants and the tutor evidenced three significant patterns, as discussed in the following sections.

Pattern 1: the teaching becomes social

In the analysis, the teaching presence category encompassed a clear social component that did not fit the original framework. Teaching presence is defined as focusing "on the roles and functions that a teacher performs in order to create and maintain a dynamic learning environment" (Vaughan, 2004, p. 16). Garrison and Anderson highlight the idea that "all participants have the opportunity to contribute to teaching presence" (2003, p. 71), despite the key role of the tutor.

In the original CoI framework, the social aspects of teaching presence are restricted to those that are directly related to course content (Anderson *et al*, 2001, p. 4), captured under the "facilitating discourse" category. Contributions of a purely social nature are not accounted for within the teaching presence dimension. Teaching presence discourse would be more effectively described if there were an explicit social dimension within the construct, as there is in the work of other authors who explored computer conferencing prior to the creation of the CoI framework (eg, Mason, 1991; Paulsen, 1995, cited in Anderson *et al*, 2001).

The message that follows, written by the tutor-researcher in the public space in response to one of the students' questions, evidences the different kinds of discourse within the teaching presence dimension, where the tutor offers encouragement and provides direct instruction.

Hi <student's name>!

I'm fine, feeling much better thank god.

I think your idea of starting the speaking lesson with scenes from the sitcom is very nice. What level will you be using it with? A good source of scenes from friends is youtube, for example <web address>. That is a scene where they fight, but if that's no good you can easily find others. After the scenes, what were you planning to do?

I don't know which level you were thinking of, but just in case, if you go into ACDP Methodology and look under August, there is a PDF entitled "friendship problems." Maybe that helps? Let me know.

The data excerpt above should be coded as teaching presence according to Garrison *et al*'s (2000) original concepts. However, the social aspects of the tutor's discourse are evident in different phrases ("I'm fine, feeling much better thank god"; "Maybe that helps?"; "Let me know"). The act of teaching cannot occur in isolation.

In the next quotation, the tutor tries to "draw the participant in" and engage her and the rest of the group in a cognitive process, making reference to previous exchanges. The social elements within the teaching discourse are again prevalent and significant. The tutor explicitly shares her personal experience and attempts to trigger a response from the group.

Like you <student's name>, I have two groups of students who are doing the same course yet with such different attitudes—in this particular case I believe it is to do with "negative leaders," as we were discussing with Soledad a while ago. So it is essential for me to reflect and work in action research cycles if I want both groups to be successful. Also, I agree with Juliana on the fact that both things and people have changed, and although we were not used to questioning teachers, our students nowadays are. However, I too believe this is a very challenging twist our profession has taken—instead of the eager-to-please students we used to be, youngsters are now more critical. That has to be good on some level . . . Do you see what I mean? Anyone else care to comment? 😊

The original CoI framework would refer to messages such as the one above as examples of teaching presence, despite the prominence of the social elements in the tutor's discourse. The repeated occurrence of instances of teaching presence where the teaching aspects cannot be readily separated from the social dimension has led us to put forward a new version of the CoI framework, in which the different and overlapping functions of the tutor's online discourse can be shown.

Pattern 2: the cognitive becomes social

The boundaries between social and cognitive discourse were blurred: the social element permeated most layers of cognitive presence. The evidence suggests that one of the main limitations of the CoI framework is its limited effectiveness in describing students' online discourse, as can be seen in the extract below.

Hi <student's name>, I'm <name> from Town C, how are you? I would like to know how you motivate your teenage students . . . Because for me it's difficult to get it, I have a specific case (that worries me) maybe I can tell you about it later. Keep in touch!
<name>

Given that much of the work was conducted online, students repeatedly asked questions not only directed to the tutor but also to each other, either by email or in the Moodle online space. In the original framework, Garrison *et al* (2000) regarded the questions asked by students in shared online spaces, such as those above, as instances of social presence. However, a cognitive dimension is clear from the message, in which one participant is responding to another participant's posting, requesting advice ("I would like to know how . . ."; "Because for me it's difficult to get it, I have a specific case . . .").

Another example can be found in the following message. The participant is responding to a message by the tutor, requesting the tutor's advice with regard to a specific aspect of her teaching practice.

Hi <tutor's name>

On one hand, I am keen on learning how to make my students improve when they have to speak in front of the class in a public speaking task. I don't know what the problem is exactly. What do you think about this? On the other hand, I would like to know if there is any website where my students could practise their pronunciation and their speaking skills with native speakers, apart from what they do with me. Hope to hear from you soon.

The questions were asked in a public online environment, suggesting that Garrison *et al* (2000) would normally have described the above as an example of social presence. However, it shows a

clear intention to exchange ideas and explore possibilities (“What do you think about this?”; “I would like to know . . .”), both of which are described by the authors themselves as cognitive moves (Garrison *et al*, 2000, see Table 4). It thus becomes evident once again that the social and cognitive dimensions are not easy to separate from one another.

Cognitive presence is not always easy to identify in online discourse, as explained by Garrison *et al* (2001): “The difficulty of assessing critical thinking as a product is that it is a complex and (only indirectly) accessible cognitive process.” The findings suggest that abstract phases of knowledge construction, such as integration and resolution, were not evident in the online discussions, but were visible in activities such as research assignments and materials design (see Shea *et al*, 2010). According to the original CoI framework, cognitive activity evident in student discourse could only be categorised as social.

Pattern 3: the social remains social

A third pattern found in the study concerned the limitations of social presence discourse to enhance higher-order learning. The evidence suggests that social presence *per se* does not lead to an increase in participants’ cognitive discourse, nor does it have any tangible effects on participants’ willingness to become more “visible” to their peers. Additional opportunities to express participants’ social presence do not lead to increased online participation.

During the second iteration of the study, a “café” area on Moodle was introduced, with the aim of offering participants a purely social space. In terms of course design, the social “café” space was devised to “. . . foster the online community spirit by creating a forum that was explicitly social, for all participants to learn about each other and therefore feel less inhibited to express themselves in the public domain” (De Stefani, 2012, p.150). Because all of them were novice online learners, it was thought that an exclusively social space would present an opportunity for participants to express themselves freely. It was hoped that this increased social discourse would be an initial step towards discourse of a more cognitive nature, once they had become accustomed to the online arena. However, this was not the case, as the café space gradually but steadily lost momentum.

Below is an example of a message from a participant who attempted to take part in the café space, sharing personal information and encouraging others to do the same.

Hi everybody! My name is <name>. I’m from [name of institute in town T]. I’ve been working at [institute’s name] for 14 years. I’m 34, I am married and I have a 15-year-old daughter. I teach for 14 hours a day so my day is quite long and tiring but rewarding. However, some days I feel I shouldn’t have got up, especially those days when my teenage students are really difficult. I teach all the different levels, but I prefer children and adults. Anyway, talking about something different, I love doing aerobics and when the weather is good I enjoy walking in the park. I also like spending time at home tidying up or sleeping until later which is only possible on Sundays. Ok, I could go on and on but I believe this is just enough. I hope to learn about more people_ Bye! 😊

This participant’s post generated only three replies, one of which was from the course tutor. The exchange of personal information did not continue, although there were other attempts to promote contact of a purely social nature, such as the one below.

I don’t know how you are feeling at this time of the year, but I am exhausted since next Friday Town B we have MOCK EXAM all day long so students are doing tests and working hard, as a result, I have a pile of homework and writing tasks to correct, can you imagine?

This type of contribution did not generate significant interaction among participants. One possible reason for the relative failure of the social space is that social exchanges need to have cognitive purposes if they are to prosper (Garrison & Anderson, 2003; Garrison & Vaughan, 2008). However, many participants did reply to the tutor’s posts regularly, albeit privately, which suggests a preference for one-to-one interactions. This “privatisation of knowledge,” as described

by Grunberg and Armellini (2004, p. 603), could also be an attempt by teachers not to “lose face” publicly: when the social overlaps with the cognitive space and one’s limitations risk becoming visible to others, participants switch to the private domain. There was no evidence that the platform itself (Moodle) constituted a driver or a barrier to online exchanges.

Conclusions

This study set out to answer the following research question:

What roles do cognitive, social and teaching “presences” (Garrison *et al.*, 2000) play in the professional development of language teachers in blended learning settings?

This study of a blended learning setting involving language teachers in Uruguay suggested that social presence was core to the teaching and cognitive presence discourse. Both teaching presence and cognitive presence “became social,” as shown in Patterns 1 and 2 above. In other words, social presence became bigger and more pervasive than the original CoI framework suggests.

Social presence did not operate well as a stand-alone construct (Pattern 3). Social presence plays a central role in the construction of meaningful teaching and cognitive discourse, sense-making and higher-order learning. However, the promotion of social presence in online learning may not *per se* generate enhanced cognition among participants.

On the basis of this evidence, a new version of Garrison *et al.*'s (2000) CoI framework is shown in Figure 2. The diagram retains the three overlapping constructs of social, teaching and cognitive presences, and has the student learning experience at the heart of the three. However, *social* presence is now the central construct of the framework. The diagram illustrates the social nature of the other two: both teaching presence and cognitive presence have “become social.”

In line with previous research, this study highlighted the many complex ways in which social presence interacts with its teaching and cognitive counterparts. Figure 2 shows social presence as highly embedded in, and with major influence on, the other two constructs, allowing for the creation of diverse online learning and teaching spaces.

Area 1: interactions for learning. This area reflects the first pattern described in the fifth section: *the teaching becomes social*. Teaching discourse in online environments contains a markedly social component that is essential for the meaningful engagement of participants and colleagues. The teaching presence shown to enable these processes contains regular instances of

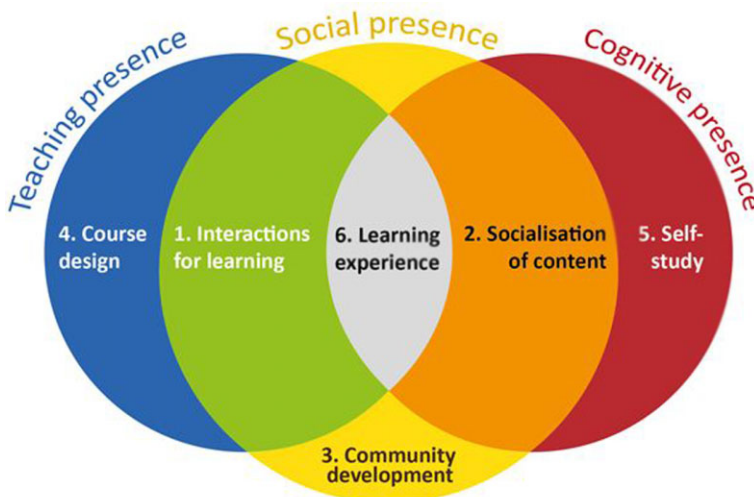


Figure 2: A new version of the Community of Inquiry framework

social discourse, particularly in the form of tutor–learner interactions, which provide a scaffold to the learning process and creates opportunities to promote higher-order thinking.

Area 2: socialisation of content. Participants make use of online course materials and other forms of content (including tutors' input) to add to their existing knowledge and build new concepts. They blend this process with informal peer exchanges, whereby "serious" academic matters are discussed online within a relaxed atmosphere that includes references to topics that are not related to the course, such as the weather, family, politics, hobbies, etc. Shifts between the discussion of academic and non-academic matters in participants' discourse are rapid and spontaneous. This socialisation of content occurs through public channels (discussion forums) and private ones (instant messages and email) and maps onto the second pattern identified in this research: *the cognitive becomes social*.

Area 3: community development. Located outside the teaching and cognitive domains, this area represents the third pattern identified in this research: social presence *per se*. The online social space offered to participants during the course did not operate effectively in this study. Participants only marginally engaged in it. Most of the exchanges between participants and the tutor switched to the private domain (email) very soon after the discussion began in a discussion forum. A more structured approach to community development and peer support in shared online spaces, such as the one proposed in the socialisation stage of Salmon's (2011) five-step model, might have achieved a different result.

Area 4: course design. Course design is an aspect of teaching presence often perceived to be within the remit of a tutor or group of tutors, although opportunities for the participation of students and other stakeholders (such as employers) may be offered at different stages of the process. An example of this form of teaching presence with active participation by others is the *Carpe Diem* model of team-based course design (Salmon, 2013; Salmon, Jones & Armellini, 2008).

Area 5: self-study. A critical component of cognitive presence is the opportunity for independent study and reflection (Britt Postholm, 2008; Moon, 1999; Schön, 1987). This process includes the reformulation of new concepts and ideas in a way that reflects the learner's appropriation and incorporation of them to their own constructs. This part of the framework focuses on self-study (using a variety of online and printed resources) as distinct from group or collaborative work. The output of self-study can feed into other areas of the framework, particularly the socialisation of content (Area 2).

Area 6: the learning experience. As the central component of the framework, this area does not conceptually differ from Garrison *et al*'s original CoI framework. A successful learning experience and a critical CoI are one in which higher-order thinking is fostered through the interaction of the social, teaching and cognitive dimensions.

The proposed CoI framework (Figure 2) is not the first attempt to reconceptualise the original one (Figure 1). Shea *et al* (2014) offered a different approach, which includes a new construct termed "learner presence" (LP). LP accounts for "learner agency, control, and co-regulation of learning online" (Shea *et al*, 2014, p. 10). The framework they put forward also comprises "SLP" (social-learning presence), "STP" (social-teaching presence) and "SCP" (socio-cognitive presence). This approach shares one key feature with the one being presented here: the idea that social presence is not a stand-alone concept. Our proposed reconceptualisation, however, points to the creation of new teaching and learning spaces, as described above.

The proposed CoI framework (Figure 2) retains the three core dimensions of the original one. We believe the three core dimensions are fundamental to any successful online educational experience, yet their nature needs to be revisited to accommodate changes in teaching and learning in the 21st century, such as the effect of social networking on the teaching and learning process. For

that reason, the proposed revised version of the CoI framework highlights social presence as a core and pervasive construct, which results in meaningful and dynamic overlaps: social presence shapes and embeds itself in the other two. Teaching and cognitive presences have thus become highly social in nature.

Limitations

Three key limitations have been identified: mode of study (blended learning), discipline specificity within a single geographical context and the dual role of one of the researchers.

The study applied the CoI framework to the online components of a blended learning programme, while the original framework had originally been developed for a purely online context. This constitutes a limitation because the face-to-face dimension is likely to affect the nature of the online exchanges between participants, for example, by altering the amount and nature of the social interaction that occurs online. In their more recent work, the authors of the original framework have themselves explored the CoI framework in the blended learning arena (Garrison & Vaughan, 2008).

The study focused on a single discipline (in-service language teacher education) in a particular country setting (provincial and rural Uruguay). Similar results might be expected in similar settings, however, especially in the River Plate region of Latin America. The sample was specific and limited, but comprised teachers from a variety of regions, of different ages, levels of teaching experience and digital literacy. This was their first experience in an environment that involved a significant amount of online work.

Only one of the researchers conducted the data collection and analysis. She was also the course tutor, which may have led to some “social desirability” (Muijs, 2004) in the participants’ discourse. The generalisability of the findings and the applicability of the new version of the CoI framework should be considered in the light of these limitations.

Further research

The present paper suggests an evidence-based adjustment to the original CoI framework (Garrison *et al.*, 2000). The role of social presence, and in particular, its interaction with teaching presence and cognitive presence, needs to be further researched in other settings and in relation to other disciplines in different modes of study.

The proposed framework would benefit from additional research around the six areas identified in the sixth section. In particular, Areas 1, 2, 3 and 6 (interactions for learning, socialisation of content, community development and the learning experience respectively) offer a range of research opportunities that would enhance the research presented here and our understanding of communities of inquiry. Such work would also bolster the applicability of the proposed version of the framework.

Acknowledgements

The authors wish to thank Dr Julian Edge and Dr Brenda Cecilia Padilla Rodríguez for their invaluable feedback on earlier versions of this paper. Also many thanks to Juan Pablo Armellini for his assistance in the digitisation of Figure 2.

Statements on open data, ethics and conflict of interest

a. Access to data

The relevant data sets collected during this research will be made openly available through the University of Northampton’s online repository.

b. Ethics

This research project was approved by the University of Manchester’s ethics committee, prior to the commencement of the collection of data. In addition, the project was approved and

supported by the Language Teaching School in Uruguay, for which all research participants (language teachers) work.

c. Conflicts of interest

There are no conflicts of interest involving either of the authors of this paper.

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, 3, 3–22.
- Akyol, Z. & Garrison, D. R. (2010). Understanding cognitive presence in an online and blended community of inquiry: assessing outcomes and processes for deep approaches to learning. *British Journal of Educational Technology*, 42, 2, 233–250.
- Akyol, Z. & Garrison, D. R. (2011). Assessing metacognition in an online Community of Inquiry. *The Internet and Higher Education*, 14, 3, 183–190.
- Anderson, T., Rourke, L., Garrison, D. & Archer, W. (2001). Assessing teaching presence in a computer conferencing context. *Journal of Asynchronous Learning Networks*, 5, 2, 1–17.
- Annand, D. (2011). Social presence within the Community of Inquiry framework. *The International Review of Research in Open and Distance Learning (IRRODL)*, 12, 5. <http://www.irrodl.org/index.php/irrodl/article/view/924/1855>.
- Bloom, B., Engelhart, M., Furst, E., Hill, W. & Krathwohl, D. (1956). *Taxonomy of educational objectives: the classification of educational goals. Handbook 1: cognitive domain*. New York: David McKay.
- Britt Postholm, M. (2008). Teachers developing practice: reflection as a key activity. *Teaching and Teacher Education*, 24, 1717–1728. doi: 10.1016/j.tate.2008.02.024.
- Bull, G., Park, J., Searson, M., Thompson, A., Mishra, P., Koehler, M. J. & Knezek, G. (2007). Editorial: Developing technology policies for effective classroom practice. *Contemporary Issues in Technology and Teacher Education*, 7, 3, 129–139.
- Davis, N. E. & Roblyer, M. D. (2005). Preparing teachers for the “schools that technology built”: evaluation of a program to train teachers for virtual schooling. *Journal of Research on Technology in Education*, 37, 4, 399–409.
- De Stefani, M. (2012). *Exploring the possible: empowering language teachers in provincial Uruguay through blended learning*. Unpublished doctoral thesis. Manchester: University of Manchester.
- Dewey, J. (1938). Logic: the theory of inquiry. In J. Boydston (Ed.), *John Dewey, the later works, 1925–1953* Vol. 12 (pp. 1–5). Carbondale, IL: SIU Press.
- Donnelly, R. (2006). Blended problem-based learning for teacher education: lessons learnt. *Learning, Media and Technology*, 31, 2, 93–116.
- Fereday, J. & Muir-Cochrane, E. (2006). Demonstrating rigor using thematic analysis: a hybrid approach of inductive and deductive coding and theme development. *International Journal of Qualitative Methods*, 5, 1, 1–11.
- Garrison, D. R. (2009). Communities of inquiry in online learning. In P. Rogers, G. Berg, J. Boettcher, C. Howard, L. Justice & K. Schenk (Eds.), *Encyclopedia of distance learning, Second edition* (pp. 352–355). Hershey, PA: Information Science Reference. doi:10.4018/978-1-60566-198-8.ch052
- Garrison, D. R. & Akyol, Z. (2013). Toward the development of a metacognition construct for communities of inquiry. *The Internet and Higher Education*, 17, 84–89.
- Garrison, D. R. & Anderson, T. (2003). *E-learning in the 21st century*. New York: Taylor & Francis.
- Garrison, D. R. & Arbaugh, J. B. (2007). Researching the community of inquiry framework: review, issues, and future directions. *The Internet and Higher Education*, 10, 3, 157–172.
- Garrison, D. R. & Vaughan, N. (2008). *Blended learning in higher education*. San Francisco: Jossey Bass.
- Garrison, D. R., Anderson, T. & Archer, W. (2000). Critical inquiry in a text-based environment: computer conferencing in higher education. *The Internet and Higher Education*, 2, 87–105.
- Garrison, D. R., Anderson, T. & Archer, W. (2001). Critical thinking, cognitive presence, and computer conferencing in distance education. *American Journal of Distance Education*, 15, 1, 7–23.
- Garrison, D. R., Cleveland-Innes, M. & Fung, T. (2010). Exploring causal relationships among teaching, cognitive and social presence: student perceptions of the Community of Inquiry framework. *The Internet and Higher Education*, 13, 31–36.
- Grunberg, J. & Armellini, A. (2004). Teacher collegiality and electronic communication: a study of the collaborative uses of email by secondary school teachers in Uruguay. *British Journal of Educational Technology*, 35, 5, 597–606.
- Hughes, G. (2007). Using blended learning to increase learner support and improve retention. *Teaching in Higher Education*, 12, 3, 349–363.

- Kanuka, H., Liam, R. & Laflamme, E. (2007). The influence of instructional methods on the quality of online discussion. *British Journal of Educational Technology*, 38, 2, 260–271.
- Krathwohl, D. (2002). A revision of bloom's taxonomy: an overview. *Theory into Practice*, 41, 4, 212–218.
- Kreijns, K., Van Acker, E., Vermeulen, M. & van Buuren, H. (2014). Community of Inquiry: social presence revisited. *E-Learning and Digital Media*, 11, 1, 5–18.
- Kupczynski, L., 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.
- Lipman, M. (1991). *Thinking in education*. New York: Cambridge University Press.
- Mason, R. (1991). Moderating educational computer conferencing. [Online]. *DEOSNEWS*, 1, 19. (Archived as DEOSNEWS 91-00011 on LISTSERV@PSUVM).
- Matzat, U. (2013). Do blended virtual learning communities enhance teachers' professional development more than virtual ones? A large scale empirical comparison. *Computers & Education*, 60, 1, 40–51.
- Moon, J. A. (1999). *A handbook of reflective and experiential learning*. London: Routledge.
- Motschnig-Pitrik, R. & Standl, B. (2013). Person-centered technology enhanced learning: dimensions of added value. *Computers in Human Behavior*, 29, 2, 401–409.
- Motteram, G. (2006). 'Blended' education and the transformation of teachers: a long-term case study in postgraduate UK Higher Education. *British Journal of Educational Technology*, 37, 17–30.
- Muijs, D. (2004). *Doing quantitative research in education with SPSS*. London: SAGE.
- Paulsen, M. (1995). Moderating educational computer conferences. In Z. Berge & M. Collins (Eds), *Computer-mediated communication and the on-line classroom in distance education* (pp. 81–104). Cresskill, NJ: Hampton Press.
- Rourke, L. & Anderson, T. (2002). Using peer teams to lead online discussion. *Journal of Interactive Media in Education*, 1. ISSN:1365-893X. DOI: 10.5334/2002-1. <http://jime.open.ac.uk/articles/10.5334/2002-1/>
- Rourke, L. & Kanuka, H. (2009). Learning in Communities of Inquiry: a review of the literature. *International Journal of E-Learning & Distance Education*, 23, 1, 19–48.
- Rovai, A. & Jordan, H. (2004). Blended learning and sense of community: a comparative analysis with traditional and fully online graduate courses. *International Review of Research in Open and Distance Learning*, 5, 1–13.
- Salmon, G. (2011). *E-moderating. The key to teaching and learning online* (3rd ed.). Abingdon and New York: Routledge.
- Salmon, G. (2013). *E-tivities. The key to active online learning*. Abingdon and New York: Routledge.
- Salmon, G., Jones, S. & Armellini, A. (2008). Building institutional capability in e-learning design. *ALT-J: Research in Learning Technology*, 16, 2, 95–109.
- Schön, D. (1987). *Educating the reflective practitioner*. San Francisco: Jossey-Bass.
- Shea, P. & Bidjerano, T. (2009). Community of inquiry as a theoretical framework to foster "epistemic engagement" and "cognitive presence" in online education. *Computers & Education*, 52, 3, 543–553.
- Shea, P., Hayes, S. & Vickers, J. (2010). Online instructional effort measured through the lens of teaching presence in the Community of Inquiry framework: a re-examination of measures and approach. *International Review of Research in Open and Distance Learning*, 11, 3, 127–154.
- Shea, P., Hayes, S., Uzuner-Smith, S., Gozza-Cohen, M., Vickers, J. & Bidjerano, T. (2014). Reconceptualizing the Community of Inquiry framework: an exploratory analysis. *The Internet and Higher Education*, 23, 9–17.
- Stodel, E. J., Thompson, T. L. & MacDonald, C. J. (2006). 'Learners' perspectives on what is missing from online learning: interpretations through the Community of Inquiry framework. *The International Review of Research in Open and Distance Learning (IRRODL)*, 7, 3. <http://www.irrodl.org/index.php/irrodl/article/view/325/743>.
- Swan, K. & Shih, L. (2005). On the nature and development of social presence in online course discussions. *Journal of Asynchronous Learning Networks*, 9, 3, 115–136.
- Swan, K., Shea, P., Richardson, J., Ice, P., Garrison, D. R., Cleveland-Innes, M. et al (2008). Validating a measurement tool of presence in online communities of inquiry. *E-Mentor*, 2, 24, 1–12.
- Thornton, K. & Yoong, P. (2011). Mixing face-to-face and online interactions in a leadership development programme: a blended action learning approach. *Journal of Interactive Learning Research*, 22(3), 401–420.
- Vaughan, N. (2004). Investigating how a blended learning approach can support an inquiry process within a faculty learning community (PhD thesis, University of Calgary).