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Problems Measuring Social Presence in a Community of Inquiry

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Abstract

To improve research conducted on communities of inquiry, a group of researchers created the Community of Inquiry Questionnaire (CoIQ). While the development of the CoIQ is a step in the right direction, this instrument does not align as well as it could with previous research on each of the individual presences (i.e., cognitive presence, teaching presence, social presence) that make up the Community of Inquiry (CoI) framework. For instance, the questions in the CoIQ focused on measuring social presence do not align as well as they could with the previous indicators of social presence developed by Rourke, Anderson, Garrison, and Archer (2001). In this paper, we outline the misalignment we have encountered when using the CoIQ in our own research and ways we think future research on communities of inquiry could be improved.

Introduction

When we started teaching online, we worried about how students and instructors socially interact in online learning environments. We feared that many of the things that "worked" so well in face-to-face courses--like an instructor's immediacy, passion, energy, humor--would not translate well to online environments. Due to this fear, over the years we began researching how people naturally adapt to communication media and establish themselves as "real" and "there" (i.e., establish their social presence) as well as how instructors intentionally design courses and facilitate discourse that encourages students to establish their own social presence. For instance, we have experimented with using digital storytelling (Lowenthal & Dunlap, 2010), using digital music (Dunlap & Lowenthal, 2010), using social media (Dunlap & Lowenthal, 2009, 2011), and even using "low tech" strategies (Dunlap & Lowenthal, 2010) to establish social presence in our online courses. However, despite our efforts, we continue to remain dissatisfied with our social presence endeavors (Lowenthal & Dunlap, 2011). We are still unsure of the best ways to help establish social presence, how much is needed, when it is needed, and how much effort instructors should spend on social presence (Lowenthal & Dunlap, 2011). As we researched social presence over the years, we began to notice that popular instruments used to measure social presence appear to be out of alignment. In this paper, we outline the misalignment we have encountered and the problems we have had measuring social presence using the Community of Inquiry framework.

The Community of Inquiry Framework

The Community of Inquiry (CoI) framework, as the readers are likely aware, is a comprehensive guide for the research and practice of online learning (Garrison & Arbaugh,

2007). This framework posits that meaningful learning takes place in a CoI, comprised of teachers and students, through the interaction of three core elements:

- cognitive presence,
- social presence, and
- teaching presence. (Garrison, Anderson, & Archer, 2000)

Early on, researchers studied each of the individual presences (i.e., cognitive presence, social presence, and teaching presence) separately (e.g., Arbaugh & Hwang, 2006; McKlin, Harmon, Evans, & Jone, 2002; Rourke & Anderson, 2002; Shea, Pickett, & Pelt, 2003). In fact, the study of social presence dates back to the 1970s and the work of Short, Williams, and Christie (1976) and has a long history apart from the CoI (see Lowenthal, 2009). Further, there was and continues to be research conducted on social presence that is not grounded in the CoI framework (Gunawardena, 1995; Gunawardena & Zittle, 1997; Keengwe, Adjei-Boateng, & Diteeyont, 2012; Richardson & Swan, 2003; Tu, 2001, 2002a, 2002b). The majority of research on social presence and online learning, however, continues to be conducted within the CoI framework (see Diaz, Swan, Ice, & Kupczynski, 2010; Lowenthal, 2009; Rourke & Kanuka, 2009). During the past few years, though, researchers have focused more on studying all three of the presences that make up the CoI together (e.g., Akyol, Vaughan, & Garrison, 2011; Arbaugh, Bangert, & Cleveland-Innes, 2010; Ke, 2010) rather than anyone of the presences by itself. Regardless of whether one is studying all three of the presences together or simply focusing on one of the presences by itself (e.g., social presence), , historically there has been very little consistency on the methods or instruments used to study social presence in particular or communities of inquiry as a whole (see Arbaugh et al., 2008; Lowenthal, 2009).

Because of this, recognizing the need for a shared CoI instrument, a number of researchers came together to develop the Community of Inquiry Questionnaire (CoIQ; see Arbaugh et al., 2008; Swan et al., 2008). For the first time, researchers of communities of inquiry had a single instrument to use. We immediately used the CoIQ in a couple of our own studies (Lowenthal & Dunlap, 2011; Lowenthal, Lowenthal, & White, 2009). At the same time, recognizing limitations of self-report survey measures—for example, they can be retroactive and insensitive to change over time (Kramer, Oh, & Fussell, 2006, p. 1)—we also conducted studies analyzing online threaded discussions using a modified version of the social presence indicators developed by Garrison and his colleagues (Rourke et al., 2001; see Lowenthal, 2012; Lowenthal & Lowenthal, 2010). Regardless of how we studied social presence, we became convinced—and inspired by the works of others like Swan and Shih (2005) and Shea et al. (2010)—that researching social presence might benefit from employing multiple or mixed methods (see Lowenthal & Leech, 2009).

We immediately began thinking about how researchers could use the CoIQ in combination with the indicators of social presence originally developed by Rourke et al. (2001). But as we started comparing the categories and indicators of social presence developed to code online discussions (see Garrison et al., 2000; Rourke et al., 2001) to the questions in the CoIQ, we began to notice that they did not compliment each other as much as they could. In other words, the indicators (i.e., codes and definitions) used to measure elements of the CoI, like social presence, do not align as much as they could with questions in the CoIQ created to measure social presence. In the following pages, we illustrate what we see as a disconnect between these two instruments by focusing on social presence (our main area of research).

A Comparison of Social Presence Indicators & Questions

Garrison et al. (2000) describe in their foundational article how they developed categories of social presence by looking for evidence of social presence in computer conferences. As they found examples of social presence, they grouped them into three categories:

- Emotional Expression,
- Open Communication, and
- Group Cohesion (Garrison et al., 2000).

Over time though, Garrison and his colleagues continued to refine these categories of social presence (see Rourke, 2001). They explain that they did this through an iterative process which involved deriving behavioral indices from the three categories of social presence and then deductively applying indicators of social interaction from the literature as well as indices deduced from reading transcripts of online discussions (Rourke et al., 2001, Content Analysis of Social Presence Section). This process of refinement resulted in them relabeling their original categories of social presence into the following:

- Affective responses (originally emotional expression)
- Interactive responses (originally open communication)
- Cohesive responses (originally group cohesion)

This iterative process also resulted in a list of specific indicators of social presence. According to Rourke et al. (2001), these indicators were developed to serve as an instrument to code examples of social presence in online discussions (see Figure 1).

Garrison and his colleagues though were quick to point out that their "assignment of indicators to categories" was tentative (Content Analysis of Social Presence Section). Further, they openly questioned whether each of the indicators should be treated equally. For instance,

some of the indicators were for the most part dependent on the discussion board system being used (e.g., quoting from other messages). Finally, and perhaps most importantly, they invited others to build upon and verify the indicators of social presence that they developed. This suggests that the indicators (and one might possibly speculate that the categories) were not viewed as final or set in stone. While a few researchers have continued to tweak these social presence indicators by adding an indicator, dropping an indicator, or modifying one (e.g., Swan, 2003 and Hughes et al. 2007), these indicators largely remain unchanged.

Figure 1. Categories and Indicators of Social Presence

CATEGORIES & INDICATORS OF SOCIAL PRESENCE

Affective Responses (originally "*Emotional Expression*")
- Expression of emotions
- Use of Humor
- Self-Disclosure

Interactive Responses (originally "*Open Communication*")
- Continuing a Thread
- Quoting from Other Messages
- Referring explicitly to other messages
- Asking questions
- Complimenting, expressing appreciation
- Expressing agreement

Cohesive Responses (originally "*Group Cohesion*")
- Vocatives
- Addresses or refers to the group using inclusive pronouns
- Phatics / Salutations

Note. From "Assessing Social Presence in Asynchronous Text-based Computer Conferencing," by L. Rourke, D. R. Garrison, and W. Archer, 2001, in *Journal of Distance Education*, 14.

So given the unfinalized or fluid state of the social presence indicators, it might seem premature to expect an alignment between these indicators and the CoIQ. Further, given the way researchers like Swan (2003) and Hughes et al. (2007) have added and deleted indicators of

social presence, it might seem difficult to even decide which set of indicators a researcher should use. Our goal in this paper is not to provide a definitive answer to this problem of alignment but rather to illustrate the larger problem of alignment that we have encountered in our own work. Therefore, for the purpose of this paper, we will focus on the indicators originally developed by Rourke et al. (2001).

The indicators of social presence were developed to identify observable instances of social presence (and specifically, affective expression, open communication, and group cohesion) in Computer-mediated Communication (CMC) whereas the CoIQ was developed to investigate students' perceptions of each category of each of the three presences. However, researchers of social presence might expect that there should be a relationship between students' perceptions of each of the presences and what they and others "do" and "say" in online course discussions. We do believe, as others have pointed out (e.g., Shea & Bidjerano, 2010), that important things happen outside of online threaded discussions (e.g., through other means of communication like email, phone calls, or even correspondence via course assignments; see Dunlap & Lowenthal, 2009, 2010). We also recognize that research suggests that there is not always a direct relationship between what students do and what they perceive. Thus, we acknowledge that it would be problematic to limit an instrument focused on communities of inquiry like the CoIQ to *only* questions that align with observable indicators. However, to some degree the two sets of instruments (i.e., the CoIQ and the indicators of each presence) could and should complement each other whenever possible as well as align with current research of the three presences. The later of which suggests that the CoIQ should be an instrument that is updated and amended over time as research and theory advances on each of the presences in the

framework (e.g., Shea and Bidjerano (2010, 2012) have made a good argument for the inclusion of "learning presence").

In the following paragraphs we will look at each of the three categories of social presence and compare the indicators developed by Rourke et al. (2001) to the questions of the CoIQ to illustrate the lack of alignment that we have faced in our own research studying social presence. This is not to suggest, though, that the indicators are correct or hold a privileged position over the CoIQ because they were created first. In fact, one way to solve any problems of alignment could simply be to revisit the indicators themselves and not to update the CoIQ. While the indicators of social presence need to be revised, the CoIQ--in part due to its widespread use--needs to be updated and expanded as well. With this in mind, we will look at each category of social presence in turn.

Emotional / Affective Expression

Rourke et al. originally postulated that expressing emotion, using humor, and self-disclosure are all examples of affective expression. The authors of the CoIQ came up with the following three questions to investigate perceptions of Affective Expression:

- 14. Getting to know other course participants gave me a sense of belonging in the course.
- 15. I was able to form distinct impressions of some course participants.
- 16. Online or web-based communication is an excellent medium for social interaction.

At first glance, these questions appear to focus on affective expression. However, we will argue in the following paragraphs that when looking at each question individually, they do not build upon prior theory and research on social presence as well as the situated nature of online learning as best as they could or as much as the indicators of social presence do.

We are strong believers in the importance of community and developing feelings of belongingness (e.g., research suggests that among other things that community and a feeling of belongingness can improve student satisfaction and persistence in online learning (see Moisey, Neu, & Cleveland-Innes, 2008; Rovai, 2002; Sadera, Robertson, Song, & Midon, 2009)). Some interpretations of social presence (see Garrison, Anderson, & Archer, 2010; Lowenthal, 2009b)—including our own (see Lowenthal & Dunlap, 2011)—often focus on a feeling of connectedness between two or more people. But it is important to note that the original theory of social presence as developed by Short et al. (1976) simply focused on how being perceived as "real" and "there" (which they believed was influenced to some degree by the communication medium being used) influences how people communicate (Lowenthal, 2009a). In other words, the research of Short et al. (1976) focused less on how groups of people develop a feeling of "connectedness" and develop a sense of "belongingness" and more on how communication media—and the degree to which people are perceived as "real" and "there" as a result of the communication media and situation—influence communication.

In our experience, students might perceive others as "real" and "there" (e.g., through the use of emoticons, humor, and self-disclosure as the social presence indicators suggest) without feeling a sense of belongingness. However, in order to develop a sense of belongingness, students typically must first get a sense of the person(s) as being "real" and "there." Therefore, working from the literature on social presence theory, question 14 focuses too much on belonging and not enough on getting a sense of other course participants as being "real" and being "there." Whether one agrees or disagrees with this claim depends largely upon how one defines and conceptualizes social presence. Definitions of social presence have evolved over

time (see Garrison, Anderson, & Archer, 2010; Lowenthal, 2009b). Garrison et al. (2000) and Rourke et al.'s (2001) early work defined social presence as:

- "...the ability of participants in a community of inquiry to project themselves socially and emotionally, as "real" people (i.e., their full personality), through the medium of communication being used" (Garrison et al., 2000, p. 94); as well as,
- "...the ability of learners to project themselves socially and emotionally in a community of inquiry" (Rourke et al., 2001, The Community of Inquiry Model section)

More recent work of Garrison's, though, defines social presence as "the ability of participants to identify with the community (e.g., course of study), communicate purposefully in a trusting environment, and develop inter-personal relationships by way of projecting their individual personalities (Garrison, in press)" (as cited in Arbaugh et al. 2008; also see Garrison et al. 2010 for more on how their conceptualization of social presence has changed). If one conceptualizes social presence more in the latter then question 14 could be seen as building upon recent literature. But for others—especially those who place less emphasis on belongingness and more emphasis on more traditional definitions of social presence—question 14 strays too far from the literature. However, even more importantly, there is no mention of community or belonging in the original indicators that make up the category of Affective Expression. Further, a question focused on "belonging" also seems to relate to the category of "Group Cohesion" (which is one of the other three categories of social presence).

The next question, question 15 (i.e., *I was able to form distinct impressions of some course participants*), at least in terms of alignment between the CoIQ and indicators of social presence, appears to align the best. This question is grounded in the definition and theory of social presence by focusing on one's ability to form or get a sense of others. Further, the way the

question is worded allows for the reality that students often will not be able to get a sense of *every* student in a specific course. So if students are using humor, emotion, and self disclosure, then it is likely that others are going to be able to form distinct impressions of each other as being "real" and "there."

The third and final question under the Affective Category, question 16 (i.e., *Online or web-based communication is an excellent medium for social interaction*), appears to be taken from Gunawardena and Zittle's (1997) social presence scale in The GlobalEd Questionnaire. The problem with this question is that it focuses on students' perceptions of web-based communication devoid of context. The problem with this is that it seems to ignore early research on social presence and CMC which suggests that it matters as much if not more what one does with a communication medium than any supposed capabilities of a communication medium (Walther, 1992, 1996). In fact, Rourke et al. point out that:

> we do not believe that the effect of media per se is the most salient factor in determining the degree of social presence that participants develop and share through the mediated discourse. Rather, the communication context created through familiarity, skills, motivation, organizational commitment, activities, and length of time in using the media directly influence the social presence that develops. (p. 94-95)

Further, the inclusion of the word excellent in many ways further complicates this question. For instance, it seems reasonable that someone might think web-based communication is an excellent medium but that it is not always used in an excellent way. Or that all communication media have their affordances and constraints and therefore no communication medium are inherently an "excellent medium for social interaction." This question as worded focuses too much on assumptions of a communication medium and not enough on how people

utilize or perceive the way others utilize a communication medium for affective expression. Additionally, and most importantly in terms of alignment, this question does not align directly with any of the indicators of the Affective Expression category. It seems to focus more on the general notion of "social interaction" and not enough on the specifics of the Affective category like expressing emotions, using humor, and self-disclosure.

While the focus of this paper is not to re-write the CoIQ or the social presence indicators, we still wanted to offer a few suggestions on how the CoIQ could be amended to improve alignment. Ideally, an instrument investigating affective expression would assess both one's perceptions of one's own ability to project oneself as "real" or "there" as well as one's perceptions of others abilities to project themselves as "real" or "there." With this in mind, the following are some examples of the *types* of questions that *might* be included in an updated version of the CoIQ (some of which mirror some past research on social presence: see Richardson and Swan, 2003):

- I formed distinct impressions of some course participants;
- I projected who I am to other course participants;
- I expressed emotions in this course
- I used humor in this course
- I self-disclosed information about life outside of class
- Others expressed emotions in this course
- Others used humor in this course
- Others self-disclosed personal information in the course

Open / Interactive Communication

The second category of social presence is open communication. Rourke et al. (2001) originally identified things such as continuing a thread, asking questions, and expressing appreciation as indicators of open communication. The authors of the CoIQ created the following three questions to investigate perceptions of open communication:

- 17. I felt comfortable conversing through the online medium.
- 18. I felt comfortable participating in the course discussions.
- 19. I felt comfortable interacting with other course participants.

These three questions, perhaps better than all of the other questions of the CoIQ focused on social presence, do a great job of acknowledging the situated nature of learning online. In other words, each of these questions could be answered differently for different course experiences. Researchers have pointed out that situational factors (e.g., course duration or course subject) can influence what happens while learning online (Arbaugh, Bangert, & Cleveland-Innes, 2010; Gorsky, Caspi, Antonovsky, Blau, & Mansur, 2010). Therefore, any instrument used to measure social presence should recognize the situated nature of learning online and how context can change everything (see Lowenthal, Wilson, & Parrish, 2009). For instance, it is possible that students are comfortable conversing online (e.g., in Facebook) or even taking part in course discussions in certain online courses but not comfortable taking part in course discussions in other online courses (e.g., one's that might involve real-time synchronous debates). Each of these questions also builds upon each other in nice ways. This helps a researcher to get a better idea of the degree to which people generally feel comfortable with open communication in a specific online course (e.g., students might feel comfortable conversing through the online medium but not comfortable participating in course discussions).

These questions also align the best with their corresponding social presence indicators in that each question focuses on open communication and each indicator can generally be aligned with one of the CoIQ questions. Nevertheless, these questions seem to lack a specificity that their corresponding social presence indicators provide. For instance, the social presence indicators focus on how one interacts with others (e.g., do they acknowledge the posts of others, do they agree or disagree with others, do they ask questions and invite responses, and do they express appreciation) whereas questions 17-19 focus more on as a whole are students comfortable conversing online, comfortable participating in course discussions, and comfortable interacting with others. This lack of specificity could possibly mask interesting findings about one's perceptions of open communication.

Another possible weakness of questions 17-19—at least in terms of alignment—is that they arguably focus too much on one's comfort level and not enough on one's ability or one's actual behavior online as the indicators do. In other words, students regularly have to do things in educational settings that are not comfortable. Is it not possible that one is capable of projecting oneself as a real person but does not feel comfortable doing so? Furthermore, as researchers, are we interested in what people are comfortable doing, what people are capable of doing, or what people actually perceive that they do in online courses? Most likely researchers are interested in all three. But in terms of alignment, the CoIQ could be strengthened by focusing on students perceptions of what they do online rather than what they are comfortable doing. Finally, research suggests that meaningful communication happens outside of threaded discussions (Shea & Bidjerano, 2010). Because of this, questions that focus on open communication should either be more general as not to focus solely on online course discussions (e.g., I felt comfortable participating in my online course) or be broken up into a series of questions that specify the type

of conversing or participating that took place (e.g., threaded discussions vs. synchronous chats vs. email and so forth). For instance, some students might feel comfortable emailing or instant messaging course participants but not comfortable taking part in online threaded discussions.

With these points in mind, the following are some ways that the open communication questions of the CoIQ might be re-written to better align with their corresponding social presence indicators:

- I expressed agreement or disagreement with others or the content of others' messages
- I complimented others or the contents of their messages
- I asked questions
- I directly referred to the contents of others posts
- I communicated effectively using online communication tools (e.g., threaded discussions, email, and instant messaging)
- Others communicated effectively using online communication tools (e.g., threaded discussions, email, and instant messaging) with me
- I felt comfortable participating in online threaded discussions
- I felt comfortable interacting with others.

Group Cohesion

The third and final category of social presence is group cohesion. Indicators of group cohesion according to Rourke et al. are things like using vocatives, phatics and salutations, and inclusive pronouns. The part of the CoIQ focused on group cohesion entails the following three questions:

- 20. I felt comfortable disagreeing with other course participants while still maintaining a sense of trust.
- 21. I felt that my point of view was acknowledged by other course participants.
- 22. Online discussions help me to develop a sense of collaboration.

Question 20 (i.e., *I felt comfortable disagreeing with other course participants while still maintaining a sense of trust*) focuses on students' level of comfort disagreeing with other course participants. While this question focuses on the general concept of "group cohesion," it suffers from a few issues. One problem with this question is that when one looks at the indicators developed by Rourke et al. (2001), agreement was originally considered an indicator of open / interactive communication and not group cohesion. While agreeing and disagreeing with others are two different things (see Lowenthal, 2012), subsequent researchers (Swan, 2003; Swan & Shih, 2005) changed the indicator of "agreement" to "agreement/disagreement" thus blurring the lines between where a question focused on disagreement should align (e.g, should it be an example of interactive communication or group cohesion).

However, even if one looks past this possible issue of overlap, the question as worded has some problems. For instance, this question—like some of the previous questions—focuses on one's comfort level rather than on what one actually does thus putting it at odds with the observable indicators of social presence (e.g., what does trust look like?). While it might be important to know if someone felt comfortable disagreeing with others, it is equally important—if not more important (especially in terms of alignment)—to know if one actually disagreed with others and still felt part of the group. This question seems to presuppose that there is already a sense of trust and that the student was able to do things (in this case disagree with others) and still maintain a sense of trust. It could be that a student disagrees with part of this question but

not the other. For example, a student might feel comfortable disagreeing with others but never feel a strong sense of trust with the group. Further, while many might think of a trusting environment as a place where one is able to disagree with others, in our experience teaching online, some students simply are not comfortable with disagreeing with others (especially their instructor) and do not see the two as related. Finally, in terms of alignment, none of the indicators of group cohesion seem to address disagreeing or trust. This does not mean that additional indicators cannot be added or that every question in the CoIQ must align perfectly with one of the indicators but rather that this idea of being in a trusting environment is not represented in Rourke et al.'s original list of indicators.

While some questions of the CoIQ focus on students' perceptions of their ability or comfort level projecting themselves as "there" and "real," question 21 (i.e., *I felt that my point of view was acknowledged by other course participants*) appears to focus more on how students feel acknowledged by the group. This makes sense given the focus on group cohesion but "acknowledgement" shows up as an indicator of interactive communication (see Rourke et al., 2001 and Swan, 2003). This is another example where a specific question in the CoIQ appears to align with an indicator in another category. Ideally, the CoIQ would align more closely which each category.

Question 22 (i.e., *Online discussions help me to develop a sense of collaboration*) focuses on students' perceptions of using online discussions to develop a sense of collaboration with his or her peers. Online discussions have been described as the bread and butter of online courses (Dunlap & Lowenthal, 2011b). In our experience, online discussions are not inherently good or bad--rather, it depends on when and how they are used. Therefore, we struggle with a question like this that asks for students' perceptions of online discussions as if they are all the same. For

instance, it could be that small group online discussions--or specifically group work--can help develop a sense of collaboration but large class discussions do not (see Lowenthal, 2012). Further, and perhaps even more importantly, students develop a sense of group cohesion in multiple ways in online courses—only one of which takes place in online threaded discussions (Lowenthal, 2012). Our research suggests that some of the best ways students build group cohesion is through working in small groups on group projects—where much of the communication often takes place through various mediums, some of which takes place outside of the Learning Management System (e.g., phone calls, instant messaging) (see Dunlap & Lowenthal, 2010; Lowenthal & Dunlap, 2011). Because of this, ideally a question like this would either be stated in broader terms which recognize the multiple ways in which students communicate or broken down into different questions which ask specifically about how online discussions are used to develop a sense of group cohesion as well as other communication media. For instance, this question might be improved by either simply adding the word "can" (e.g., online discussions can help me to develop a sense of collaboration) or perhaps by changing it to something like, "the online discussions in this class helped me to develop a sense of collaboration." Finally, in terms of alignment with the group cohesion indicators of social presence, there is not a specific focus on collaboration in any of the group cohesion indicators.

The following are some ways that the group cohesion questions of the CoIQ might be re-written to better align with their corresponding social presence indicators:

- I was able to develop a sense of collaboration with my peers.
- I used greetings and salutations
- Others used greetings and salutations
- I referred to other participants by their first name

- Others addressed me by my first name
- I addressed the group using inclusive pronouns
- Others addressed the group using inclusive pronouns

Implications and Concluding Thoughts

The CoI framework is a popular framework for researching and understanding what happens in online courses (Boston et al., 2009). But the CoI framework was originally conceptualized over 12 years ago. A lot has changed since the CoI was first developed. For instance, online learning has grown dramatically. In 2002, Sloan-C reported that 1,602,970 people in the U.S. took at least one online course; that number grew to 6,142,280 in 2010 (Allen & Seaman, 2011). At the same time, people's day-to-day use of technology—whether that be through using social networking sites like Facebook or one's smart phone—has also changed drastically. No longer is communicating with CMC a novelty—it is commonplace. We contend that it is reasonable to assume that changes such as these have influenced the way that people communicate online and adapt to "online" communication media as well as the way that people perceive their own as well as others communication behaviors in online environments. This is not to suggest that the CoI is no longer relevant. In fact, one could argue that it is more relevant now than ever. However, it is to suggest that our instruments used to investigate communities of inquiry in general but especially social presence in particular need to be revisited and adjusted over time.

The development of a shared instrument to measure communities of inquiry (i.e., the CoIQ) was needed and the collaboration it took to develop it should be commended. But we posit that studying communities of inquiry should—whenever possible given a study's research

questions—involve multiple methods. One strategy to accomplish this is to combine the CoIQ with the indicators developed to identify each of the presences. But for this strategy to be as effective as possible, the CoIQ and the indicators of each of the presences should align as much as possible with each other as well as current research.

We contend that practitioners and researchers alike should be concerned not just in how people perceive each of the presences but also in what people—whether that be instructors or students—actually do during online courses and how this behavior relates to their perceptions. By better aligning the CoIQ and the indicators of each of the presences, both the research and the practice of online learning is likely to improve. Our primary interest is in social presence. And therefore we have focused on comparing the questions of the CoIQ to the indicators of social presence but we believe a similar analysis can and should be done between the rest of the CoIQ and the other indicators developed to measure each of the presences. In conclusion, we recognize that we have asked more questions than we provided answers to. In the end, we hope that sharing our experience comparing these two instruments of social presence simply opens a dialogue among researchers about the degree to which our instruments can or should better align with each other moving forward and ways in which each instrument can be updated over time.

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