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Conceptualizing and Investigating Instructor Presence in Online Learning Environments

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Conceptualizing and Investigating Instructor Presence in Online Learning Environments

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Abstract

As online learning opportunities continue to grow it is important to continually consider instructor practices. Using case study methodology this study conceptualizes instructor presence, the intersection of social and teaching presence as defined within the Community of Inquiry literature, and is based in the implementation phase of online courses which is important to note since instructors often teach courses they did not design or develop. The investigation of the instructor presence behaviors of 12 online instructors and the emerging profiles of instructor presence provide a gateway to strategies for online instructors and offer a window into the ways instructional presence elements work together while providing insights into how to make the best use of online instructor time. In practical terms, the profiling method provides a useful way for practitioners to improve their own experiences.

Keywords: Distance education; online education; community of inquiry; instructor presence

Introduction

The past decade has seen an unswerving increase in online learning (Allen & Seaman, 2013). Although online education offers many exciting opportunities, it also presents a number of challenges. For example, many instructors are being asked to teach online with little to no previous experience, and have reported difficulty determining how to make the best use of their time in the online environment (Van de Vord & Pogue, 2012). Also, students participating in online courses have reported that they feel disconnected from their peers and instructor, struggle to understand instructional goals, and miss receiving real-time feedback (Kim, Liu, & Bonk, 2005; Kruger-Ross & Waters, 2013; Song, Singleton, Hill, & Koh, 2004). Many of these reported challenges relate to the frequency, type, and timing of communication methods used in developing relationships and interpersonal connections in the online environment (Swan, 2002).

Researchers have reported that an instructor's ability to establish his/her presence in an online course can potentially mitigate these challenges (Garrison, Anderson, & Archer, 2000; Palloff & Pratt, 2007; Swan, 2002). However, many online instructors have insufficient guidance for enacting their presence in online environments. This study conceptualizes and investigates the concept of instructor presence, the intersection of social and teaching presence as defined within the Community of Inquiry literature, allowing us to glimpse what instructor presence looks like in practice.

Community of Inquiry

To consider the dynamics and challenges present in online instructional environments, many scholars have utilized the Community of Inquiry (CoI) framework to ensure that research explorations are completed in a meaningful and efficient manner (Garrison, 2007). The CoI framework is comprised of three key constructs: social presence, teaching presence, and cognitive presence, and contends that the resulting online educational experience for students is determined by how these three elements interrelate. In general, students reported that feelings of isolation relate to the construct of social presence, while instructors' approaches to addressing this specific challenge relates to the construct of teaching presence (Anderson, Rourke, Garrison, & Archer, 2001; Richardson & Swan, 2003).

Social Presence

Social presence in online learning is commonly defined as the degree to which participants feel connected to one another in an online community (Boston, Diaz, Gibson, Ice, Richardson & Swan, 2009; Garrison & Arbaugh, 2007; Oztok & Brett, 2011). The CoI framework characterizes it as the elements of affective expression ("where learners share personal experiences of emotion, feelings, beliefs, and values"), open communication ("where learners build and sustain a sense of group commitment"), and group cohesion ("where learners interact around common intellectual activities and tasks") (Swan, Garrison & Richardson, 2009, p. 52). These elements are designated

by indicators for affective (e.g., paralanguage, emotions, humor), cohesive (e.g., greetings, vocatives, social sharing), and interactive (e.g., invitation, approval, advice) responses (Swan, et. al., 2009, p. 52). In practice, a number of instructional strategies and behaviors (e.g., providing students timely feedback, using audio feedback, and using digital storytelling) have been found to enhance social presence (Aragon, 2003; Lowenthal & Dunlap, 2010; Rourke, Anderson, Garrison & Archer, 1999). Furthermore, there is general agreement that social presence plays a mediating role for both teaching presence and cognitive presence within a Community of Inquiry (Garrison, 2011; Garrison & Akyol, 2013; Kozan & Richardson, 2014; Oztok & Brett, 2011; Shea, Vickers, & Hayes, 2010).

Moreover, research has demonstrated that social presence is related to students' actual and perceived learning (Hostetter & Busch, 2013; Picciano, 2002; Richardson & Swan, 2003). Researchers have reported a positive relationship between students' perceived social presence and their satisfaction with their instructors (Richardson & Swan, 2003), with their courses (Akyol & Garrison, 2008; Hostetter & Busch, 2006), as well as with retention rates in online courses (Boston, et. al., 2009). These findings point to the importance of social presence in the learning process.

Teaching Presence

Teaching presence is also a critical aspect in creating effective online learning communities. Garrison et al. (2000) argued that even though both social and content-related interactions among participants are necessary in online communities, online interactions are not enough to ensure effective online learning. For this reason, teaching presence is considered important in directing these interactions. Teaching presence represents "the 'methods' that instructors use to create the quality online instructional experiences that support and sustain productive communities of inquiry" (Bangert, 2008, p. 40). Teaching presence behaviors utilized by online instructors can be broken into specific categories: design and organization ("the planning and design of the structure, process, interaction, and evaluation aspects of the online course"), direct instruction ("the instructor provision of intellectual and scholarly leadership in part through the sharing of their subject matter knowledge with the students"), and facilitating discourse ("the means by which students are engaged in interacting about and building upon the information provided in the course instructional materials") (Swan, Shea, Richardson, Ice, Garrison, Cleveland-Innes & Arbaugh, 2008, p. 3). Finally, a more recent fourth category, assessment, includes "both formative and summative assessment across a broad range of instructor and student activities that occur within an online course" (Shea et al., 2010, p. 134).

In addition to defining teaching presence, efforts have been made to identify what teaching presence looks like in practice (Swan, 2002; Shea, et al., 2006; Shea et al., 2010). For instance, using survey data, Shea et al. (2006) found that students were "significantly more likely to report higher levels of learning and community when they perceived higher teaching presence behaviors" (p. 185). Similarly, Kupczynski, Ice, Wiesenmayer, and McCluskey (2010) found that,

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depending on student level (i.e., undergraduate vs. graduate), students perceived different teaching presence factors related to their success (e.g., direct instruction, facilitation, and discourse) or lack of success (e.g., lack of feedback, unclear course communications) in an online course.

Instructor Presence

Emerging from the intersection of social presence and teaching presence is the concept of instructor presence. In some cases to date, this term appears to be used interchangeably with teaching presence (Lear, Isernhagen, LaCost, & King, 2009; Sheridan & Kelly, 2010). However, there are distinct differences between these two constructs in that instructor presence is based on more observable instructional behaviors and actions than teaching presence. In other words, instructor presence is more likely to be manifested in the "live" part of courses—as they are being implemented—as opposed to during the course design process. This is important to note since instructors often teach courses they did not design or develop and this practice continues to grow as online learning enrollment numbers continue to grow.

Synthesizing literature focused on aspects of instructor presence is insightful. Students value many actions, attributes, and behaviors of instructors and likely develop a perception of an instructor's presence from their observations of what has been traditionally considered either social or teaching presence. Wise, Chang, Duffy, and Valle (2004) describe instructor social presence as a factor enabling learners to see their instructors as caring, helpful people. Research reveals that students value instructors who are responsive to their needs (Hodges & Cowan, 2012; Sheridan & Kelly, 2010). Additionally, an aspect of instructor presence is instructor immediacy. Based on the reviewed research, instructors reduced the student perception of distance through timely responses and feedback, and developing a sense of community with students (Hodges & Cowan, 2012; Sheridan & Kelly, 2010). Students rated clear directions and course requirements as one of the most important aspects of instructor presence (Hodges & Cowan, 2012; Sheridan & Kelly, 2010). Synthesizing these ideas, we are defining instructor presence as the specific actions and behaviors taken by the instructor that project him/herself as a real person. In other words, instructor presence relates to how an instructor positions him/herself socially and pedagogically in an online community, and would fall at the intersection of teaching presence and social presence within the CoI framework.

Breaking down this construct and describing specific cases of instructor presence allows us to gain a deeper understanding of the online instructor processes, and to consider specific instructor actions, interactions, and styles influencing this process. Therefore, the purpose of this study is to explore the construct of instructor presence in an online environment. Specifically, the following research questions guided this study:

How is instructor presence conceptualized and how do online instructors incorporate instructor presence in their courses?

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How do specific actions and behaviors taken by instructors come together to form profiles of instructor presence?

Method

Research Design

To examine instructor presence in online environments, this research used a descriptive multiplecase study approach (Yin, 2009) with the intent to both build an explanation of instructor presence behaviors and actions and conduct a cross-case synthesis. Descriptive case studies are useful in describing "an intervention or phenomenon and the real-life context in which it occurred" (Baxter & Jack, 2008, p. 548), and using this approach while considering instructor presence in an online instructional environment affords the opportunity to consider this construct while relying on the literature to guide the process (Yin, 2014).

At the same time, using a multiple-case study approach provides the opportunity for a more robust and reliable study and can overcome weaknesses (e.g., uniqueness and artificial conditions) associated with single case studies (Baxter & Jack, 2008; Yin, 2014). By analyzing multiple cases, instructor presence can be more fully understood, as this phenomenon was considered both from studying the individual instructor's approach and the combined methods of all instructors in an online program. Additionally, by examining instructor presence, or build an explanation of such (Yin, 2009). As a framework for understanding instructor presence, we used the CoI framework and focused on the juncture of teaching presence and social presence, the area that is conceptually most aligned with the role of the instructor.

Context and Participants

The data were gathered from an online Master's Program in Learning Design and Technology (LDT) at a large Midwestern public university. The online Master's Program is a 20-month, fully online program which enrolls approximately 200 students on a continuous basis. Courses in the program run eight weeks in length.

This study examined the instructor presence of 12 instructors in these sections allowing for individual instructors to be the unit of analysis. Instructors for these courses include both full-time university faculty members (n=3) and limited-term lecturers (n=9). Table 1 presents information regarding instructor information; pseudonyms were assigned.

Table 1

Instructor Information

Instructor	Online	Teaching	First	TA	#
	Teaching	background	Time		Enrolled
	Experience		Teaching		
	Level*		course		
		<u></u>			
Liam	High	K-12 and	Yes	No	15
		Higher Ed			
Isabelle	High	K-12 and		Yes	13
	0	Higher Ed			
Heather	High	K-12 and	Yes	Yes	13
	0	Higher Ed			
Emma	High	K-12 and		Yes	14
	8	Higher Ed		100	
Amy	High	Higher Ed	Yes	No	15
miy	Ingn	Inglici Lu	105	110	10
Ava	High	Higher Ed		No	19
11 vu	11.9.1	Inglief Eu		110	10
T -1					10
Ethan	Medium	Higher Ed		No	13
Sophia	Medium	Higher Ed		No	13
Julie	Medium	Higher Ed	Yes	No	13
Julie	Medium	Tingilei Lu	165	INU	15
Daniel	High	Higher Ed		No	11
Damei	Ingn	Tingilei Lu		INU	11
T 1	TT: J			37	10
Jake	High	Higher Ed		Yes	13
Olivia	High	Corporate &	Yes	No	13
		Higher Ed			

*High Experience level indicates 5 years or more experience teaching online or 10+ courses, Medium 2-4 years

Purposive sampling was employed when selecting instructors for the study. In this research, three required courses were selected to explore instructor presence: EDCI 53100 (Learning Theories and ID), EDCI 57200 (Learning Systems Design), and EDCI 67200 (Advanced Practices in Learning Systems Design). These courses were chosen as they represent three diverse experiences and perspectives including both introductory and advanced coursework. These sections were offered during the summer and fall of 2013 and spring of 2014. The courses were designed by full-time faculty members and common elements (e.g., weekly overviews, discussion question prompts) across each section of a course were present.

Data Sources and Analysis

Archived course observations.

From Blackboard, instructors' communications, interactions, and actions were collected for each course instructor within the learning management system. Any interactions that may have occurred outside of the BB system (e.g., e-mail communications with students) were not included as we did not have complete access to those aspects for each instructor. The data sources were coded at the sentence level.

Data analysis.

To conceptualize instructor presence and answer the first research question, the research team began by developing instructor audits or individual instructor case studies (Creswell, 2014, p. 193). We developed a coding schema which was based on social presence and teaching presence indicators presented by previous researchers (Akyol, 2009; Rourke et al., 1999; Shea et al., 2010; Swan, 2002); deductive and inductive methods were utilized. After piloting the initial codes, the research team met on multiple occasions to further enhance the coding schema through an analytic induction process that included (1) the development of emergent codes, (2) broadening or narrowing of previous codes, (3) collapsing codes, and (4) deletion of codes not related to the instructor's actions or behaviors.

Considering that the previous teaching and social presence indicators and codes were based not only on instructor's actions and behaviors but also student action and behaviors, our first step was to delete codes that were not directly related to our instructors. Next, codes were modified generally based on a need to narrow, broaden, or fine tune codes, based on their previous use. For example, Swan's "social sharing", "course reflection", and "paralanguage" were modified in our coding schema (2002). Social sharing was broken out into several other codes, including Affective (AF)-Self-disclosure, AF-Value, and AF-Humor. Paralanguage had previously been used to convey emotions outside of formal text (Swan, 2002, p. 37); in our case, we found some paralanguage examples were based in emotion while others were used to add emphasis (e.g., due date reminders). This also led to the code AF-Emphasis being added. An example of broadening a code is Shea et al.'s (2010) Summarizing Discussion to our facilitating discussion (FD-Summ) to be inclusive of all course activities and not just discussions. Additionally, the development of emergent codes was an ongoing process that mostly began with noting codes that seemed to fall outside current codes. Finally, we felt it was necessary to include new social presence Cohesive codes (CO) related to collaboration and diversity-two aspects that the program in the study has been working to integrate. The new codes were piloted and modified or collapsed in a number of cases. Emergent codes were considered acceptable once 5 or more instances were located within the data. See Appendix A for the final coding schema with definitions, examples, notes on revisions, and number of observed occurrences.

Upon reaching the point of saturation within the codes (Creswell, 2014), the final coding schema led to 43 items focusing on the two main categories: teaching presence (28 indicators) and social presence (15 indicators). A total of 12,602 references were coded.

For the second research question, using the indicators as a descriptive framework, the research team organized and grouped data to form instructor presence profiles (Yin, 2014). Specifically, this process was completed by making connections across teaching presence categories through grouping similar indicators together. Once indicators were grouped based on similarity, prominent roles were identified in order to describe and classify the indicators. Then, for each instructor, a teaching presence profile was constructed by calculating the percentage each role represented of the total number of indicators observed in a particular course. Finally, social presence indicators were considered in combination with the teaching presence profiles. For each of the roles indicated from the teaching presence indicators, ways that social presence indicators enhanced the instructional approach were identified and described.

Reliability and validity.

In order to establish the reliability of the coding procedure, three researchers independently coded instructors' postings allowing for triangulation of coding. We then compared the results and consensus building allowed for 100 % inter-coder agreement for all courses (Creswell, 2014). Additionally, the research team avoided "code drifting" by meeting regularly and discussing any misunderstandings or uncommon coding aspects as they arose (e.g., peer debriefing) (Creswell, 2014, p. 203).

When ensuring validity of the research, it is important to note that each member of the research team was familiar, either as a student or instructor, with the online program under study, which allowed for insight into the general operations of and layout of the courses (e.g., prolonged engagement). We attempted to overcome any bias in their association with the program by engaging in researcher reflexivity (Creswell, 2014), and ensuring no researcher coded a course in which they were enrolled, served as an instructor/teaching assistant, or was taught by their advisor. As the coding schema developed over time, an audit trail was kept to remind the team where we had been, decisions we had made, and questions we planned to revisit as the schema evolved (Miles, Huberman, & Saldana, 2014).

Results

RQ1: How is instructor presence conceptualized and how do online instructors incorporate instructor presence in their courses?

Case studies were developed for the twelve instructors and commonalities and differences were noted as a means to better understand what was happening across the courses and what instructor presence "looked like". Instructors' involvement levels were the highest in discussion and announcement portions of the courses as was anticipated. As researchers we determined that quantitative content analysis would not be effective as various codes hold more weight than others. In other words, a coded segment that provides a detailed explanation or example would take more effort for an instructor versus a coded segment that was based on highlighting a due date yet each would count as 1 coded segment. However, using the codes is a useful descriptive tool. As evidenced in Table 2, the number of codes for instructors ranged from 478-2,792 for a single course. We can also see that a number of our instructors were fairly balanced (45-55% or 55-45%) between social presence and teaching presence codes. All but three instructors had an equal or greater number of social presence codes compared to teaching presence codes.

Table 2

Course	Instructor	Total Coding	% Social	% Teaching
		References	Presence	Presence
			Codes	Codes
EDCI 531	Instructor1	2792	77	23
	Instructor2	783	59	41
	Instructor3	1178	47	53
	Instructor4	1074	54	46
EDCI 572	Instructor1	239	45	55
	Instructor2	498	48	52
	Instructor3	926	51	49
	Instructor4	690	50	50
EDCI 672	Instructor1	1587	62	38
	Instructor2	478	54	46
	Instructor3	1177	66	34
	Instructor4	1180	74	26
	TOTAL	12602	57	43

Number and Percent of Codes per Instructor

*Pseudonyms have been removed to ensure privacy

The categories for the social presence (Affective, Cohesive, Interactive) and teaching presence codes (Design and Organization, Direct Instruction, Facilitating Discussion, and Assessment) were examined to identify potential patterns in the instructor cases. For each instructor, the two

categories with the most observed indicators were identified (see Table 3). Across all instructors, the categories that were most prevalent were Affective (AF) (n=7), Design and Organization (DE) (n=7), Interactive (I) (n=5), and Cohesive (CO) (n=3). Direct Instruction (DI) was only the most popular for one instructor and Assessment (AS), as would be expected, was not the most popular for any instructor. However, it was interesting to note that Facilitating Discourse (FD) was also not highly represented.

Next, we examined the instructor cases for specific codes from within the categories, specifically the number of observations. Table 3 shows the codes with the highest number of observations.

Table 3

Rank	Code	Number of
		observations
	Top 10 Codes Overall	
1	AF-Emphasis	1793
2	AF-Emot	1346
3	I- Approval	927
4	CO- Name	806
5	DE-Info	755
6	CO- Greetings	738
7	CO- Group	561
8	I- Acknowledgement	541
9	DI-Clarify	424
10	FD-Tips	417
	Top 5 Social Presence Codes	
1	AF-Emphasis	1793
2	AF-Emot	1346
3	I-Approval	927
4	CO- Name	806
5	CO- Greetings	738
	Top 5 Teaching Presence Codes	
1	DE-Info	755
2	DI-Clarify	424
3	FD-Tips	417
4	DE-Establishing time parameters	396
5	FD-Prompt	377

Instructor Presence Codes with the Highest Number of Observations

Interestingly, of the top ten codes observed across the cases, seven fell within the social presence category. However, a closer look at the actual categories reminds us of the differing weight that

should be given to codes based on instructor effort. Codes such as AF-Emphasis (e.g., highlighting), AF-Emotions (e.g., the use of text, emoticons, or unusual punctuation to express "nonverbal" emotions), and CO-Name (e.g., use of student's name) are easily added without much instructor effort, yet are very important in the scope of the instructor role. The top five teaching presence indicators tell us that the instructors' actions and behaviors go a long way to trying to help keep students on track and informed (e.g., establishing time parameters for learning activities), clarifying misunderstandings, providing tips on how to succeed, and moving their thinking and knowledge forward through the use of required prompts. By looking at the most common codes observed, we can get a sense of the instructors' role in an online course and even the ease of being present with behaviors and actions that are not very time consuming (e.g., due date reminders).

RQ2: How do specific actions and behaviors taken by instructors come together to form profiles of instructor presence?

To develop meaningful profiles for researchers and practitioners we began by identifying prominent instructional roles, by grouping similar teaching presence indicators together. From this process, five distinct instructional roles emerged: advocating, facilitating, sense making, organizing, and maintaining.

While teaching presence is a well-established construct (Garrison et al., 2000, 2001) and a number of indicators for teaching presence have been established (Shea et al., 2010), the roles described here attempt to connect aspects of the teaching presence construct across teaching presence categories. Table 4 includes a full description of each role and the indicators that illustrate that role.

Table 4

Overview of Instructors' Teaching Presence Roles

Role	Description	Indicators
Advocating	In this role, the instructor serves as an advocate in students' learning. He or she supports students by encouraging them through assignments and providing tips for being successful both on assignments and beyond the course (e.g., in the instructional design field). At the same time, this advocacy can be seen in the course climate being set by the instructor and the instructors' willingness to be available as necessary to support students' needs. Overall, these actions and behaviors can empower students to take ownership and to have confidence as they participate in course activities.	FD-Encourage FD-Tips FD-TipsOutside DE-Climate DE-Avail
Facilitating	As an instructor facilitates, he or she takes an active voice in the course discourse, while providing direction to the ideas being considered and discussed. While facilitating, instructors will set the initial direction of the discussion through prompting students to consider specific questions or to participate from assigned perspectives. At the same time, facilitation also includes the continued conversation that instructors encourage through asking important questions at appropriate times. Through these processes, instructors will summarize ideas and provide alternative ideas to prompt students to consider course topics more fully.	FD-Prompt I-Invitation FD-Summary FD-Alt
Sense Making	Instructor provides support to students by helping students make sense of course and field concepts and ideas. As the instructor is promoting sense-making, he or she scaffolds in a variety of ways: clarifying points, providing resources and examples, demonstrating expected behaviors, and sharing both formative and summative feedback on course discussions and assignments. Generally, when in this role, instructors are supporting, modeling, and clarifying as students make sense of course and program objectives.	DI-Resource DI-Example DI-Clarify DI-Demo AS-FRMDSC AS-FRMOTHER AS-SUMDSC AS-SUMOTHER
Organizing	One role of an instructor in an online course is to provide structure to course organization and activities. An instructor	DE-Info DE-Designing Method DE-Resource

	provides this necessary structure through communicating to students general information, expectations/requirements of course assignments, and due dates. Additionally, instructors will share course- level resources that are helpful for students as the complete requirements.	DE-Example DE-Time Parameters AS-Info
Maintaining	To maintain course flow, instructors utilize multiple administrative actions. First, instructors direct students on where to find course elements and how to navigate the course. Additionally, instructors will address any technology concerns and share any necessary technology platforms for course communication. As instructors coordinate course aspects and logistics, they will also remind students of important course information (e.g., due dates, assignment criteria, etc.) and clarify procedural requirements of the course. Finally, they will solicit course evaluation feedback from students.	DE-Nav DE-Tech DE-Remind DE-Clarify AS-FRMCOURSE AS-SUMCOURSE

Placing an instructor in only one role seems inaccurate and impractical, as effective instructors appear to take on all of these instructional roles at some point as they teach an online course (Anderson et al., 2001). For this reason, the profiles for instructors' teaching presence were constructed by calculating the percentage each role comprised an instructor's total teaching presence. As a result, each instructor profile reflects how an individual teaching presence breaks down across all teaching roles. It is important to note that these profiles do not consider the number of indicators observed for an instructor, rather they provide an illustration of how the indicators fulfill specific teaching roles. In addition, while evidence suggests that all instructors have taken on all five roles, for a given instructor, a given role may represent less than 10% or as much as 50% of an instructor's total teaching presence roles. Table 5 shows percentages for each instructor in this study.

Table 5

Instructor	Teaching Pre	sence Roles			
	Advocating	Facilitating	Sense Making	Organizing	Maintaining
Amy	22%	24%	8%	28%	18%
Liam	16%	7%	29%	30%	18%
Ava	25%	18%	24%	21%	12%
Isabelle	31%	12%	19%	21%	17%
Olivia	23%	19%	27%	11%	19%
Jake	23%	6%	11%	33%	27%
Heather	14%	26%	13%	25%	22%
Emma	10%	26%	28%	20%	16%
Ethan	12%	6%	50%	18%	13%
Sophia	19%	12%	6%	44%	19%
Julie	14%	15%	28%	29%	14%
Daniel	23%	6%	32%	24%	15%

Instructor Teaching Presence Profiles

Considering how the various roles work together is very useful in describing an instructor's teaching presence. For instance, an instructor whose teaching presence is dominated by administrative roles projects a different presence than an instructor whose prominent teaching roles consist of facilitating and helping students make sense of the course's various activities. At the same time, examining the combination of the roles is interesting when considering the ways in which an instructor teaches a course. Some instructors dedicate time consistently across many roles, while others direct efforts to primarily one or two roles. While the ideal combination of roles is unclear, an instructor who dedicates their time to only one or two roles may have gaps in his or her teaching presence (Anderson et al., 2001).

Next, as the instructor presence profiles were constructed, social presence indicators in the courses were considered. In this sense, social presence indicators represent characteristics of instructors, as social presence represents a communication style or the adaptation of a specific communication medium (Dunlap & Lowenthal, 2014) and therefore characteristics that enhanced their teaching presence roles. As an instructor teaches a course, he or she exhibits a certain amount of social presence depending on the particular actions and behaviors taken (Aragon, 2003; Bangert, 2008). At the same time, as instructors project their presence in one of the teaching presence roles, they may exhibit higher or lower social presence. For example, as Olivia advocates for students, her social presence is very high yet her social presence level is moderate when facilitating and organizing, and low when sense making and maintaining.

When considering the role of social presence features in instructor presence, a couple of aspects must be acknowledged. First, the number of observed indicators can impact an instructor's presence. For instance, students will likely have different perceptions of an instructor who discloses only a few pieces of information compared to an instructor who actively shares personal details. Second, an instructor's use of social presence indicators can communicate a specific overall style to students (e.g., formality vs. informality). Finally, when considering the role of both teaching presence and social presence in forming instructor presence profiles, the interaction between these elements appears to be essential (Bangert, 2008). Specifically, social presence indicators appear to play an enhancing and enabling role (Bangert, 2008; Schutt, Allen, & Laumakis, 2009; Swan & Shih, 2005) to the five teaching presence roles. When social presence indicators work with the teaching presence roles, the resulting instructor presence can be more meaningful and very powerful. Table 6 provides examples of how teaching presence roles can be enhanced by social presence indicators.

Table 6

Teaching Presence Role	Example of Less Rich Social Presence	Example with Rich Social Presence	Role of Social Presence
Advocating	We are off to a good start.	Very rich first discussion going on in our forum! The posts have been very good, so you can count on the comments made by your classmates as being truly worthwhile. Please remember, try to enjoy exploring the dense philosophical ideas rather than feeling lost! The discussion has been far better than I had expected, so thanks for the nice job on taking on the challenging discussion questions we have for this week.	In the less rich example, while the instructor does use cohesive language, no emotion can really be detected from the post. Contrastingly, in the rich example, the instructor is acknowledging and approving the student work, while also expressing excitement.
Facilitating	Outside of the funding issue due to the subset of students, do you (or does anyone else) see other potential drawbacks to starting with the after school activities?	Lisa adds: Great ideas, Joan and CareyThese are some great strategies for helping teachers feel more comfortable with the technology, in general, and the game, more specifically. Can we assume, then, that if they get this training and we add this support, that they will use the game as intended?	In these examples, both instructors are prompting the students to think deeper on the topic. However, the instructor with rich social presence uses cohesive language and approves/acknowledges of students' ideas.

Teaching Presence Roles Enhanced by Social Presence Features

Sense Making	Today education is no longer limited to the brick-and-mortar settings, and the ever- expanding world of online education has made cross- cultural awareness an absolute necessity.	The time limits for this course are insane. However, I have had a few contracts that have been totally insane. For one, we had to hire 50+ developers (about 1/2 were ID grad students and the other 1/2 Ed Psych or other grad students) We had to really template things to get things up and running quickly. We had 8 weeks to spend 1 million dollars. Leading it I had experienced IDers leading 8 teams.	Both instructors are explaining an idea or concept. While the instructor with the less rich presence does provide an example, the other instructor clarifies by disclosing a project he had personally worked on.
Organizing	I will be submitting these final grades on Monday morning, at which time it will be too late to make any adjustments.	Your final assignment and participation grades are posted - congratulations to everyone. All bonus points and all other assignments have been recorded and know that the grade you see in the gradebook is out of 100!	At first glance, these examples appear to be fairly similar. However, the rich example uses approval and emotion, making the message more personal.
Maintaining	I strongly urge you to participate in the evaluation system.	You should have all received your university level course evaluation links earlier this week! Joe and I would appreciate it if you could complete the university level survey. Please remember that there are 5 bonus points available if 90% of you complete this.	While both examples are urging students to complete the course evaluation, the use of emotion, emphasis, and detail makes the rich example more convincing.

These samples highlight the richness social presence adds to a teaching presence role. While the message may be similar across the same role with or without social presence indicators, an

instructor utilizing emotion or emphasis can communicate additional importance when sharing a due date—just like an instructor clarifying a concept can help promote deeper connections and sense making by sharing a professional experience. Figure 1 helps to demonstrate this conception.

Low

- Minimal SP indicators present
- Most prominent indicators used include greetings, acknowledgement, emotion, names, and emphasis
- Less likely to see the use of humor, cohesive, rich media, and values indicators

High

- Many SP indicators present
- In addition to using greetings/names, emotion, & emphasis consistently, strong cohesive & interactive indicators
- More likely to see disclosures, approval, and invitation

Figure 1. Social presence continuum.

Discussion

This study examined the instructor's role as a whole during the course implementation process. Instructor presence, at the intersection of social and teaching presence as defined within the CoI framework, allows researchers and practitioners to better understand that role regardless if an instructor is teaching a pre-designed course or is a course designer-instructor. Perhaps one of the most notable aspects of this study is the fact that the instructor plays so many roles and they use strategies across the continuum of the codes.

By examining the 12 instructor cases we were able to observe the activities of the instructors, the "what and how" of their actions and behaviors, allowing us to see what instructor presence looks like and provide insight into the behaviors and action of instructors as they go about their routines within an online course. Each indicator provides a definition and example which can serve as a gateway to strategies (See Appendix A). This can be especially helpful for those

instructors new to online teaching and learning because when viewed as a playbook of strategies, they can use it as they embark on new ventures. Similarly, determining the balance between teaching presence and social presence can be difficult to gauge for new to online instructors. However, the instructors in this study demonstrate the multiple styles taken while also providing insight into that balance; in this case we found that instructor actions and behaviors were fairly balanced (45-55% or 55-45%) between social presence and teaching presence.

The instructors in this study also demonstrated the relative ease with which one can provide social and learning supports to students by the sheer number of "easily inserted" or low effort behaviors that include such effects as emphasis, use of student names, and reminders of upcoming due dates. As Van de Vord & Pogue (2012), reported many online instructors have difficulty determining how to make the best use of their time in the online environment and these observations help with that challenge. In addition, course designers equipped with more knowledge about what instructor presence looks like will enable the design of online learning environments where instructors are able to more effectively leverage strategies that enhance their presence. Specifically, shifting instructors' attention on the importance of instructor presence can eliminate the common technological distractors associated with online teaching (Ladyshesky, 2013). Most importantly, instructors are able to begin to develop their own "online teacher personas" (Baran, Correia & Thompson, 2011; Richardson & Alsup, 2015).

While the focus of this study did not garner learner perspectives regarding instructor presence, it has been well documented that the online "social exchange" with their instructors is paramount to their own sense of social presence and overall satisfaction within an online learning environment (Boling, Hough, Krinsky, Saleem, & Stevens, 2012, p. 123; Liaw, 2008). Depending on whether an instructor showcases high or low levels of instructor presence can considerably impact this part of the teaching and learning dynamic. Thus, this study provides guidance for current and future online instructors to develop a deeper understanding of how to increase sense of community in the course, how to use social and teaching aspects of learning in online environments, and how to establish more effective online communication with learners.

What we observed also suggests that online teaching has indeed evolved since its major launch over a decade ago. By examining the list of indicators resulting from this study (See Appendix A) we can witness the evolution taking place in online environments as they become more commonplace. For example, we can see that the online instructors in this study transcend expectations of the early years of online learning—when providing direct instruction was considered the major task—and now incorporate a number of social presence behaviors to help students overcome the feeling of isolation, engage in a safe learning environment, and interact around common intellectual activities and tasks to build a community of inquiry. Moreover, the inclusion of new codes, such as our Cohesive codes (CO) for diversity and collaboration, demonstrate the evolution of what is important to us as instructors and designers in the area of online learning. We also know that this is an area to be visited and revisited again as the online

learning community increases in number of instructors, students, new technologies, and online models.

The results of our second research question provide a rich description of instructor presence, as well as the various intricacies involved in its formation. The results highlight how instructor presence can vary even within the same course. Moreover, the profiles offer a window into the ways instructional presence elements work together.

In practical terms, the profiling method provides a useful way for practitioners to improve their own experiences. Examining specific instructor presence profiles reveals that social presence behaviors enhance the teaching roles that an online instructor assumes when teaching a course. Depending on whether an instructor utilizes high or low social presence actions can considerably change the resulting instructional efforts. While we cannot determine from this study if one profile is more meaningful than another, we can examine the roles and behaviors utilized individually and appreciate where there is room for improvement. By examining the sample profiles established here and the examples provided by instructor profiles, online educators can reflect on their own experiences, which in turn can help them locate strengths and weaknesses within their online instructional approaches. As Baran, Correia, and Thompson (2011) suggest, the research of online teaching practices not only informs future online design and teaching, but can provide a roadmap for the training and support of online instructors as well.

Limitations and Suggestions for Future Research

Limitations for this study include observations that were limited to the actions of the course instructor within a learning management system. Additionally, online educational programs vary in course structure, design, and teaching methods, and therefore, these findings may not apply to all online educational programs. This research focuses on a single graduate program and findings may not be applicable to other graduate programs, programs in other disciplines, or to undergraduate programs (Liu et al., 2005).

The limitations in our research suggest some important directions for further research. First, future research should explore the possibility of course design as a mediating factor for the role of instructor presence. Next, this study identified how instructors project their presence by analyzing their course postings; but further research should consider how instructors perceive their instructor presence and should identify the extent to which the instructors' perceptions coincide with their behaviors. Future research should also seek to identify the students' perceptions and attitudes toward instructor presence to the degree to which it impacts their perceived or actual learning and possibly allowing us to determine ideal profiles.

While the results from this study underscore the importance of instructor presence, more research is needed to confirm and to expand on these findings. As the prominence of the online learning format for instructional experiences continues to grow, understanding these constructs

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will ensure the further improvement of the online experiences for both students and instructors. As we have seen in the research, the role of the instructor has and will continue to evolve over time, as will instructor presence.

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Appendix A: Final Coding Schema and Indicator Counts

Category	Indicators/Codes	Definition	Examples	Revisions/Notes
	AF-Self- Disclosure	Self-disclosure (e.g., instructor	The Park family spent the weekend	Based on Swan's 2002
	(n=269)	discloses about current events in their lives/educational background, family background, social manner, and hobbies)	in Indianapolis for our cousin's baby shower, so it was a weekend full of cute baby stuff!	code but the concept of "expressing vulnerability" has been reconfigured elsewhere
	AF-Value	Expressing personal values,	I value students' eager to learn from	Swan, 2002
	(n=172)	beliefs & attitudes	this course. After all, the main purpose of you taking this course and me teaching this course is to help you learn, and I do not want to punish you with a dissatisfying grade.	
	AF-Emotion	The use of text, emoticons, or	Great job !!!	Based on Swan's 2002
Affective (AF)	(n=1346)	unusual punctuation to express "nonverbal" emotions (i.e. exaggerated punctuation or	Thank you so much for allowing me to work and learn with you these past eight weeks. What a	Emotion code and broadened to include portion of Paralanguage code that

Social Presence Indicators

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	spelling) and use of descriptive words that indicate feelings (i.e. love, sad, hate, silly), enthusiasm, or social excitement	privilege to share this part of your professional journey with you	specifies emotion
AF-Emphasis	Highlighting, capitalization, or	Week 6 Activities This week, we will	Emergent
(n=1793)	colored fonts to make a concept or course activity stand out; purpose is to heighten awareness, add intonation, or stress a point.	be exploring Robert Gagne's contributions to the field. We will first talk about specific types of learning and then also discuss his outlining of the events of instruction	Stems in part from Swan's 2002 Paralanguage code
AF-Humor (n=80)	Use of humor- teasing, cajoling, irony, sarcasm, understatement	Good morning everyone and what a beautiful morning it is. You know why of course. Because you don't have an assignment due tonight!	Swan, 2002
AF-Richmedia N=(27)	Shares personal pictures; Use of rich media to project instructor's voice or face	Posts pictures of self, family, pets, etc.; records and posts video of his or her voice or face	Emergent

CO- Greetings and Salutations (n=738)	Salutations, greetings, closures	Hi folks! I hope you had a great weekend!	Rourke et al., 1999, Swan, 2002
CO- Name (n=806)	Addressing students/peers by name	Great, Mary. I particularly like the use of stories to aid in learning/encoding.	Swan's 2002 "Vocatives" code
CO- Group Reference (n=561)	Referring to the group as "we," "us," "our"	We need to represent information in an appropriate manner for the needs and preferences of our learners	Rourke et al., 1999; Swan, 2002
CO-Collaborative (n=201)	Promotes collaboration or working-together among students	I also encourage you to really collaborate with each other in the forums as well as your project teams. This is a collaborative effort and your contributions to your own, as well as your peers' learning, will go a long way to maximizing the	Emergent

Cohesive

(CO)

learning opportunities the course presents.

	CO-Diversity (n=20)	Communicates acceptance of diverse learners	If you have any questions or special needs, please feel free to let me know.	Emergent
	I- Acknowledge (n=541)	Referring directly to the contents of others' messages; quoting from others' messages, acknowledging student work./submissions	I see your submissions and am reviewing them now	Rourke et al., 1999, Swan, 2002
	I-Agreement/ Disagreement (n=133)	Expressing agreement or disagreement with others' messages	I'm with you on that; I think what you are saying is so right	Rourke et al., 1999; Swan, 2002
	I-Approval (n=927)	Expressing approval, offering praise, encouragement	GO TEAM! Wow! Excellent work. You give great examples.	Swan, 2002
(I)	I-Invitation (n=338)	Asking questions or otherwise inviting response. Note: these prompts are	Excellent question. Does anyone have thoughts on this?	Based on Rourke et al., 1999; Swan, 2002, and

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Interactive

designed to invite students to continue a conversation but are not required Shea et al., 2010

Teaching Presence Indicators

Categories	Indicators/Codes	Definition	Examples	Revisions/Notes
	DE-Avail (n=294)	Communicates availability (i.e., talking about virtual office hours)	Always feel free to send me an email with questions	Emergent
			We will be having virtual office hours today from 11:30am - 12:30 pm through Adobe Connect	
Design & Organization (DE)	DE-Clarify (n=222)	Instructor clarifies instructions or expectations for an assignment, organization of course, logistics, etc.	Please double check that what you have added is a definition of ID (the field, the process) and not ID expertise. I think there might have been some confusion about this last week	Emergent Note: DE- Clarify focuses on course maintenance, explaining the requirements of an assignment but differs from DI-Clarify which focuses on content

DE-Example (n=72)	Provides examples or formatting models to explain instruction or expectation for an assignment or organization of course more clearly.	Please include your name in the subject line of your initial post and the part your post addresses (so if your name is Kitty Kat and you are posting a response to the part 1 discussion prompt your subject line would read: Kitty Kat, part 1)	Emergent
DE-Info (n=172)	Provides general information and/or just-in- time updated information about a course	Dave and I will be grading as normal.	Based on Anderson et al's code "Setting Curriculum" (2001) and Akyol's code for "macro-level comments about course content" (2009)
DE-Navigation (n=755)	Explains how course operates and how to navigate within in the course	Intro video reviewing course layout, response in Ask the Instructor thread about where to find an item.	Emergent
DE-Remind	Reminds students about important course	Complete Course Signals Reflection and Shared	Emergent

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(n=263)	information	Reflection Wiki - you need to complete both of these in order to receive your final 10 discussion points!	
DE-Establishing time parameters (n=342)	Communicates important due dates/time frames for learning activities to help students keep pace with the course, e.g. accurate course schedule	Please note that your final case study is due tomorrow - Sunday, 23rd at midnight	Anderson et al., 2001; Shea et al., 2010
DE-Designing Methods (n=396)	Provides clear instructions how to participate in course learning activities, e.g., clear explanation of how to complete course assignments successfully	Describe a key principle (or principles) taken from a specific theory and explain and justify how the chosen theory should be applied to solve the learning problem presented in the case (minimum 400 words). This doesn't have to be the definitive "answer" to the case, but it should address the key theoretical principles of the chosen theory and apply them	Anderson et al., 2001; Shea et al., 2010

appropriately.

DE-Technology (n=358)	Use of tools outside and inside LMS; Assists students to take advantage of the online environment to enhance learning	Due to compatibility problems with Word documents on computers abroad, please use the Save As option on the File Menu to save your Week 6 Case Study 3 assignment for week as an older Word .doc format file (Microsoft Word 97/2000/XP) or an .rtf file format.	Definition broadened from Shea et al., 2010
DE-Climate (n=90)	Setting a (safe) climate for learning Helps students understand and practice the kinds of behaviors that are acceptable in online learning, e.g., providing documentation on polite forms of online interaction (establishing netiquette) and/or encouraging students exploration of	Here I will model how to provide constructive feedback to a peer Also, let's make sure to be extra respectful of each other in our comments, as it is a debate setting. In role play or debate sessions, online postings can quickly take on an insensitive tone when you do not intend them to, and in online communication in general sometimes	Based on Shea et al.'s 2010 "Establishing netiquette" and "Setting climate for learning" codes

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ideas.	meaning and intent
	can go astray. So
	please take a
	moment to be extra
	cautious with the
	words and tone - I
	appreciate it!

DE-Resource	Refers to	If you haven't visited	Emergent
(n=121)	inclusion of resources to assist student, whether technology, formatting, looking for jobs, etc. but that are outside realm of direct instruction	the concept of multimedia and copyright in a while be sure to visit this site for a refresher.	

FD-Encourage	Encourages	Let's take today to	Based on Shea
(n=365)	students through current tasks	show them how it's done. Okay - I'll admit it - I AM competitive! GO TEAM!	et al.'s 2010 "Encouraging, acknowledging or reinforcing students' contribution"
			code

FD-Prompt	Provides a	Why do you think	Narrows
	prompt for	theory is important?	definition of
(n=377)	students to	What do you think	Shea et al.'s
	answer. Note:	we can get out of "a	2010 code
	these prompts are	good theory"?	"Drawing in
	designed to be		participants,
	required by		Prompting
			discussions (ad

	students		hoc)"
FD-Tips (n=417)	Provides tips about how to do well in this course	It is important to understand the flow of the course (when readings, discussion posts, and assignments are due) and plan ahead for your project assignments;	Emergent
		Reminder: be sure to include an evaluation component for full credit	
FD-Alt (n=21)	Instructor provides alternative perspectives to broaden students' thinking about content. This can include instructor challenges to student statements, providing parallel examples, serving as devil's advocate.	An expert instructional designer is everything they need to be in their role" seems a little vague, as does this "An expert instructional designer identifies the problem and sees the solution". I would argue that a novice designer probably also sees <a> solution, it just may not be the same solution envisioned by an expert. So how does this	Emergent

differentiate novice from expert in your definition?

FD-Summ (n=62)	Summarizes collective findings	I enjoyed reading your ideas on how you would convince the Happy Valley community that the nuclear power plant is a good or bad idea using what you know about learning theories and schema theory.	Broadens Shea et al.'s 2010 code for summarizes discussion to include all activities
FD-Tips Outside (n=38)	Provides tips on life, career, program in general, anything outside of the course	The former director of our multimedia center on campus used to use a case study from the CaseBook as part of the application/interview process. I don't think folks had to solve the case on the spot but they were given it ahead of time and then had a chance to discuss their ideas for a solution during the interview. However, it would probably be even MORE instructive if they did have to solve the case	Emergent

on the spot. Demonstrate some real problem-solving skills!

DI-Clarify (n=424)	Clarifying for instructional purposes; Clarifies/explains academic concepts, topics, or processes, in other words	Anecdotal evidence, however interesting and relevant, and whether it is your own experience or someone else's experience, is typically not credible	Based on Shea et al.'s 2010 "Supplying clarifying information" code
	clarification of course content during course (considered to be just-in-time instruction)	in scholarly work. Avoid it. This means that you cannot argue that	Note: DI-Clarify focuses on content while DE-Clarify focuses on course maintenance

DI-Example	Attempts to make	In the spirit of	Collapsed
(n=197)	course content more comprehensible by providing examples, analogies, or	sharing, I invite you to look at my use of situated cognition in an online music course (at the undergraduate	several categories from Shea, et. al., 2010 (analogies, illustrations) due to limited
	illustrations that are substantive and advance understanding	college level) in which novices in reading music situate themselves as performers or conductors who read the music score as the performance is	number of occurrences

Direct Instruction (DI)

evolving.

DI-Demo (n=6)	Demonstration of a process or tool; Attempts to make course content more comprehensible through the exhibition of processes through video, multimedia or text	I've created a short video to walk you through the first steps with the tool and principles to consider when using it to build a course: http://XXX	Based on Shea et al.'s, 2010 "Conducting informative demonstrations" code
DI-Resource (n=185)	Provides just-in- time references or additional resources outside of the pre- designed course resources (e.g. textbooks)	Finally, check out this nice illustration of Gagne's 9 Events of Instruction and examples for those events. Gagne's 9 Events of Instruction, (2012).	Based on Shea et al.'s 2010 "Making explicit reference to outside material" code

AS-Frmdsc	Giving formative	Nice example of	Shea et al., 2010
	feedback for	keeping sensory	
(n=89)	discussions;	memory in mind	
		when designing	
	Explicitly	games for learning.	
	evaluates	I think this is	
	discussion/offers	particularly true for	
	feedback OR	games that include	
	diagnoses	skills to be learned.	
	misconceptions to	You mention driving,	
	help students	but I wonder if this	
		would also be	

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	learn	important for simulations for learning skills in the military. Or maybe when creating simulations for learning medical procedures. What do you think?	
AS-Frmother (n=82)	Providing formative feedback for other assignments; Explicitly evaluates other assignment types/offers feedback OR diagnoses misconceptions to help students learn	Excellent work with your assignment, very succinct summary Keep in mind that field trials take the most time and money typically. The one-on-one is probably the "cheapest" in time and money.	Shea et al., 2010
AS-Sumdsc (n=49)	Delivering summative feedback for discussions, including grades	There are quite a few sports enthusiasts in this class and it is interesting to see the connections you make between the learning theories and the teaching and practice of sports.	Shea et al., 2010
AS-Sumother	Supplying summative	Your final papers allowed me to catch a	Shea et al., 2010

(n=50)	feedback for other assignments, including grades	glimpse of how you synthesized and applied the knowledge that you gained about the learning theories and other concepts we were exposed to. It was interesting to see how each of you created your own meaning of the various theoretical perspectives. For each of you I have uploaded a document with my feedback.	
AS-Frmcourse (n=34)	Soliciting formative assessment on course design and learning activities from students and other participants; Seeks feedback upon completion of modules or during mid- course	It's already Week 4, so we'd like to hear how the class has been going for you. Please take time to let us know, so we can see how things are working out for everyone and if we need to make any modifications or improvements in any areas	Shea et al., 2010
AS-Sumcourse (n=54)	Soliciting summative assessment on course design and learning activities	Course evaluation at the University level – You must have received an email with a link to the	Shea et al., 2010

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AS-Info	Assessment	This is a 10 point	Based in part on
	information	completion grade.	Akyol's, 2009
(n=135)	provided to	Meaningas long as	and Shea, et.
	learners prior to	you address the	al.'s 2010
	submission (e.g.	components below in	"setting
	rubrics,	a clear and articulate	curriculum
	checklists, "points	manner, you will	(including
	will be deducted	receive full credit.	assessment)"
	for XYZ reasons")		codes

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