

Emotional Presence in Building an Online Learning Community Among Non-traditional Graduate Students

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Abstract

The Community of Inquiry (CoI) framework posits that a collaborative online teaching and learning process can be achieved through three interdependent dimensions of presence: cognitive presence, social presence, and teaching presence. Emotion is considered an important factor in successful online learning. This study explored non-traditional graduate students' perceived emotional presence that emerged in participants' online learning experiences. Based on quantitative and qualitative data from 45 non-traditional graduate students in the field of education, the study showed that participants demonstrated both positive emotional expressions (e.g., enjoyment and happiness) and negative expressions (e.g., frustration and disappointment) in their responses. Emotional presence ratings were found to be significantly lower than cognitive, teaching, and social presence ratings. Emotions serving different functions were also identified in responses. Directed affectiveness, the recognition and sharing of emotions between students, the instructor, and peers, surfaced where participants showed a strong emotional need to make connections. Outcome emotions were also identified where participants showed emotional responses in regard to their eventual learning outcome. We also found emotional presence by itself a significant predictor of non-traditional graduate students' satisfaction with online learning. Implications for research and practice are discussed.

Keywords: online learning, Community of Inquiry, emotional presence, non-traditional graduate students

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Emotional Presence in Building an Online Learning Community Among Non-traditional Graduate Students

The COVID-19 pandemic has impacted education systems worldwide, causing confusion and uncertainty among educators in terms of how we can perform quality educational practices while maintaining physical distancing. In higher education, the abrupt outbreak of the COVID-19 pandemic has brought online educators more pressing challenges than ever in handling the exponential growth of online learning needs. According to Seaman et al. (2018), more than 6.5 million undergraduate and graduate students in the U.S. had taken at least one online course in Fall 2016. Public four-year institutions reported a seven percent increase in online enrollment and private four-year institutions had a 13% increase during the 2016–2017 academic year (Hall, 2016). With the popularity of online education, advantages and benefits of online learning in higher education have been well-documented (Giesbers et al., 2014; Huang & Hsiao, 2012; Oztok et al., 2013). For example, much research has been done on online learning benefits, outcomes, learning activities, interactions, and teaching methods in various fields (e.g., Koo, 2019; Rodriguez-Ardura & Meseguer-Artolda, 2016; Wei, Peng, & Chou, 2015).

Despite such work, the research on the emotional element of online learning and relationship building in the online environment has been far from sufficient. Given the fact that building an emotional relationship between instructor and students in face-to-face classes is important for positive student learning outcomes (Korpershoek et al., 2016), it can be reasonably assumed that emotional presence and relationship-building also play significant roles in the online learning environment. Emotion has been considered an important factor in successful online learning (Artino, 2012; Cleveland-Innes & Campbell, 2012; Gilmore & Warren, 2007; Lipman, 2003; Marchand & Gutierrez, 2012; Swerdloff, 2015; Williams, 2017). However, limited research in higher education online learning has focused on non-traditional graduate students, a unique student body that may need additional attention. Therefore, we aspired to understand the extent to which emotional presence and relationship building are involved in non-traditional graduate students' online learning. The purpose of this study was to explore the roles emotional presence and relationship building play in online classes among non-traditional graduate students so that more emotional components could be incorporated into online course design to optimize learning outcomes. Specifically, the study strived to answer the following research questions:

RQ1: To what extent does emotion emerge in the online learning process for non-traditional adult learner students?

RQ2: What are the relationships between emotional presence, cognitive presence, social presence, teaching presence, and learners' characteristics (e.g., demographic information, personal experience with computer technologies, self-paced online learning, and social media/communication tools usages)?

RQ3: How do emotional presence, cognitive presence, social presence, and teaching presence predict students' satisfaction with their online learning experiences?

The Community of Inquiry

Based upon Dewey's (1933) pragmatic constructivism, the Community of Inquiry (CoI) framework represents the process of creating a collaborative teaching and learning process in an online learning environment through three interdependent dimensions of presence: cognitive presence, social presence, and teaching presence (Garrison et al., 2000, 2001). Cognitive presence,

under the constructivist paradigm, indicates the extent “to which the participants in any particular configuration of a community of inquiry are able to construct meaning through sustained communication” (p. 89). When the communication medium changes from face-to-face to virtual in the online environment, cognitive presence becomes vital in constructing knowledge through online discourse and reflection in which learners collaborate to explore, construct, resolve, and confirm understandings to achieve critical thinking goals (Swan & Ice, 2010). Social presence indicates participants’ ability to “project their personal characteristics into the community, thereby presenting themselves to the other participants as real people” (p. 89). It involves open communication, affective expression, and group cohesion that work together to allow the online learning climate to be supportive and encourage learners to ask questions and contribute in a meaningful way (Rourke et al., 1999). In facilitating cognitive presence, social presence is essential in achieving affective goals in the educational process, especially when non-verbal cues are lacking in the online environment. Teaching presence serves two functions: designing the teaching experience and facilitating students’ learning process, which makes it a necessary means to “support and enhance social and cognitive presence for the purpose of realizing educational outcomes” (p. 90). Thus, it requires the instructor to design, plan, structure, and organize online courses that lack face-to-face interaction to reach educational goals. Overall, cognitive, social, and teaching presence work collaboratively to create a sense of learning community and to further influence student satisfaction and their perceived learning outcomes (Garrison & Arbaugh, 2007).

The CoI framework, since its initial proposal, has attracted much research attention and been used to guide online course designs and instruction in different settings (Stenbom et al., 2012; Zydney et al., 2012). This three-dimensional framework also received a wide range of evaluations, perspectives, and critiques (Garrison et al., 2010a; Stenbom, 2018). In retrospect, Akyol and Garrison (2008) proposed that social presence seemed to be a more fluid construct compared to others and that open communication and affective expression appeared to be more important at the beginning stage of online classes whereas group cohesion stood out afterwards. Out of the three dimensions of presence, social presence seemed to be the one that set asynchronous online learning apart from counterparts (Garrison et al., 2000) due to its person-to-person collaborative nature. Furthermore, additional dimensions have been purported to be necessary for students to achieve meaningful learning in the online environment (Castellanos-Reyes, 2020) and emotional presence (Cleveland-Innes & Campbell, 2012) is one of them.

Review of Relevant Literature

Emotional Presence and Online Learning

Since Charles Darwin explained how emotions enable humans and animals to survive from the evolutionary perspective, there have been various theories that try to understand emotions from physiological, cognitive, social, and many more perspectives (Fox, 2018). In educational settings, emotions are considered multicomponent, coordinated processes of psychological subsystems involving affective, cognitive, and motivational processes where such processes interact to impact people’s learning and memory (Tettegah et al., 2015; Phelps, 2006; Tyng et al., 2017). Pekrun (2006) focused on emotions tied directly to achievement activities in academic settings and proposed that appraisals of control and values were central to achievement emotions. There are activity-related emotions (e.g., enjoyment and frustration) and outcome emotions (e.g., joy and hope).

Emotion is also considered an important factor in successful online learning in a similar way as in face-to-face learning (Marchand & Gutierrez, 2012; Swerdloff, 2015). Derks et al. (2008) reviewed empirical research that either explicitly or implicitly examined discrete emotional expressions and found that online and face-to-face emotion communication were quite similar. In the online environment, people have the same need to talk about emotional experiences as in face-to-face settings, but they may engage in more frequent and explicit emotional communication online. Lipman (2003) considered online learning a process where “emotive experience, mental acts, thinking skills, and informal fallacies” (p. 18) work together to improve reasoning and judgment. “Emotional expression” unequivocally appears as one of the three categories under social presence in the CoI framework. Cleveland-Innes and Campbell (2012) further added emotional presence as the fourth dimension to the CoI framework and defined it as “the outward expression of emotion, affect, and feeling by individuals and among individuals in a community of inquiry, as they relate to and interact with the learning technology, course content, students, and the instructor” (p. 283). It has been claimed that emotional presence should exist as a unique presence rather than being housed under the dimension of social presence. By examining students’ online learning experiences in a one-to-one online math coaching program, Stenbom et al. (2016a) identified activity emotion (Pekrun, 2006) and directed affectiveness (Derks et al., 2008) in the one-on-one Relationship of Inquiry framework and suggested that emotional presence could be outside of social presence. *Directed affectiveness* is the recognition and sharing of emotions or moods between individuals in the relationship and activity emotion refers to the ongoing process and content of the conversation. Related research also found that the emotional element in teaching presence may foster social and cognitive presence in online learning (Majeski et al., 2018). As evidenced in aforementioned studies, it is important to further investigate emotional presence in the online learning environment.

Relationship Building in Learning

Researchers have emphasized relationship building as one of the most crucial elements of successful teaching and learning in both face-to-face and online classes (Kim & Thayne, 2015; Micari & Pazos, 2012; Sakiz, 2012). Relationship building is part of teaching and learning; thus, well-established rapport between the instructor and students, and among students, leads to positive outcomes for both learners and instructors (Xiao, 2012). When student-instructor relationships are strong, learners are more likely to engage in tasks and advance their learning (Micari & Pazos, 2012), whereas a lack of supportive and affective communication between students and instructors would be adversely linked to students’ learning and academic achievement (Muilenburg & Berge, 2005). A good rapport and a positive relationship between students and instructors could decrease students’ anxiety, alleviate their negative emotions, and increase positivity (Angelaki & Mavroidis, 2013). When instructors and learners have more caring and supportive relationships, the learning climate becomes more open and harmonious, which impacts learning outcomes positively (Arghode, 2012).

Relationship building has also been considered essential in creating a collaborative online learning and teaching community (Cardullo & Burton, 2016). From setting learning objectives, to structuring pedagogically sound modules, to the course delivery, it is important to have the instructor socially present, let students feel valued, and encourage interactions among students. The degree of person-to-person contact among the instructor and students decides whether the online learning community promotes inclusion or helps with students’ sense of identity with others. Even in a K–12 online charter school setting, caring relationships between students and

teachers helped develop in-depth dialogue with students, recognize students' needs, and respond to their needs in moral education (Borup et al., 2013).

Considering that learners' characteristics are important to learner-instructor relationships and learning outcomes (Murphy, Shelley, White, & Baumann, 2011), it becomes obvious that we need to understand the educational purposes, learning contexts, as well as learner characteristics, in applying the theoretical insights of CoI to build a collaborative-constructivist online learning community of inquiry (Akyol et al., 2010; Garrison, 2011; Horzum, 2015; Shea & Bidjerano, 2009).

Learning among Non-traditional Students

The Association of Non-traditional Students in Higher Education (ANSHE) considers non-traditional graduate students to be adult students who pursue a higher degree part-time while working full-time, or those who return to school after a significant interruption in life, such as military service or family-related changes. According to the U.S. Department of Education, non-traditional students generally have the following characteristics: being independent for financial aid purposes, having one or more dependents, being a single caregiver, not having a traditional high school diploma, delaying postsecondary enrollment, attending school part-time, and being employed full-time. While non-traditional students are typically over the age of 24 (Bean & Metzner, 1985), the most recent Fall 2019 data showed that, out of the total enrollment of 19.9 million who attended colleges and universities (including both undergraduates and graduates), 7.5 million (37.69%) learners were age 25 and over (NCES, 2019). This unique population in higher education holds characteristics that are very different from the traditional ones; thus, attention is called for to meet their educational needs based upon their characteristics and circumstances (Garrison et al., 2010b; Woods & Frogge, 2017).

The andragogy theory (Knowles, 1970) proposes that adults' self-concept in learning is self-directed, intrinsically motivated to learn, and eager to know why they learn (Holton et al., 2001). Andragogy highly values adult learners' life experiences and believes learners' prior experiences provide rich resources for their learning. Consequently, adult learners are normally in need of immediate application of learning to fulfill their social roles in solving practical problems. In graduate programs serving non-traditional adult students, it is imperative that adult students' learning characteristics are well-understood so that appropriate and effective andragogical educational practices can be provided in teaching and mentoring. This becomes especially important when learning takes place online, where the medium changes from face-to-face to virtual.

Methods

Program Setting and Context

This study recruited graduate students enrolled in 100% online master's and doctoral programs in the field of education at a Texas public university. One admission requirement for these programs is a minimum number of years of full-time work experience in an educational administrative position in K–12 or higher education. Due to the nature of the programs, participants were all full-time working professionals in either K–12 school systems or postgraduate institutions, including community colleges and four-year universities. Thus, the targeted participants in this study were considered adult, non-traditional students. All master's and doctoral

courses in the target programs are asynchronous online courses delivered through the D2L Brightspace learning management system.

Instruments

Quantitative Measures: Community of Inquiry Survey, Emotional Presence, and Online Course Satisfaction Survey

Participants' cognitive, teaching, and social presence were evaluated by the 34-item CoI Survey (Arbaugh et al., 2008) with ratings from 1 (strongly disagree) to 5 (strongly agree). The CoI Survey was developed using a multi-institutional sample of 287 graduate students in either business or education from the U.S. and Canada. Cronbach's alpha was 0.94 for teaching presence, 0.91 for social presence, and 0.95 for cognitive presence. Construct validity using Principal Components Analysis showed that cognitive, social, and teaching presence accounted for 61.3% of the total variance of the scores.

Emotional presence was measured by a six-item survey (Cleveland-Innes & Campbell, 2012) using the same 5-point Likert scale (1= strongly disagree to 5 = strongly agree) as in Stenbom et al.'s (2016b) study. The internal consistency of the emotional presence six-item survey was acceptable ($\alpha = .74$). Artino's (2008) online course satisfaction survey was used to measure students' online learning satisfaction. Participants' gender, age, and ethnicity, and their personal experiences with computer technologies, self-paced online learning modules, and social media/communication tools were also collected.

Qualitative Open-ended Question about Online Learning Experiences

One open-ended question was used to gather students' perceptions about their online learning experiences with additional prompts. This question focused on students' overall online learning experiences followed by prompts: "Are you satisfied with your online learning experiences? Do you believe your online learning experiences in your program helped you learn? If yes, please list three reasons that you believe this course was successful. If not, please list three reasons that caused the failure. Please reflect on your online learning experiences and provide as much detail as possible."

Data Analysis

To answer RQ1, content analysis (Grbich, 2007; Nagai, 2015; Stone, 2001) using the provisional coding approach (Saldaña, 2009) was done by the primary researcher to identify emotion that surfaced in participants' qualitative responses. Provisional lists generated from previous research findings, i.e., the 15 emotional constructs (Cleveland-Innes & Campbell, 2012) and the emotion categories (i.e., activity emotion, outcome emotions, and directed affectiveness) (Stenbom et al., 2016a), were used in two coding phases. Descriptive statistics, repeated measures ANOVA, and correlation were used to find out the relationships between emotional, cognitive, social, teaching presence, and learners' characteristics (e.g., demographic information, personal experience with computer technologies, self-paced online learning, and social media/communication tools usages). A hierarchical regression analysis was also used to see whether emotional, cognitive, social, and teaching presence predicted students' satisfaction with their online learning experiences.

Results

Forty-seven students participated in this study, with one being excluded due to the participant's self-reported incorrect interpretation on the rating scale. One participant completed the quantitative questions only, thus his/her data was included in quantitative analysis only. Overall, the remaining 45 participants had an average age of 46.20 ($SD = 11.98$; range = 24–75). Demographic characteristics of the sample (see Table 1) showed that the majority were female (71.1%), Caucasian (73.3%), and in doctoral programs (77.8%).

Table 1

Demographic Information of the Sample (N = 45)

		<i>N</i>	Percentage
Gender	Male	13	28.9%
	Female	32	71.1%
Ethnicity	Caucasian	33	73.3%
	African- American	4	8.9%
	Hispanic	6	13.3%
	Asian	1	2.2%
	More than one race	1	2.2%
Program	Doctoral Program	35	77.8%
	Master's Program	10	22.2%

RQ1: Emotional Presence in Online Learning Experiences

Participants' qualitative responses were analyzed to identify the emotions that emerged during the reflections about their overall online learning experiences in two exploratory phases. In phase one, the 15 emotional constructs proposed by Cleveland-Innes and Campbell (2012) were used to identify the emotions. Out of the 15 emotions, *enjoyment* was identified 21 times as the most recognized emotion. Paul Goodman's statement, "Enjoyment is not a goal, it is a feeling that accompanies important ongoing activities," was adequately reflected in participants' responses. A participant stated that he/she "enjoyed working with others online" and another said, "Writing a research paper with an interview was an enjoyable experience, and also lead me down quite a few paths of learning outside of class." A participant detailed his/her joy in learning online:

The online learning experience was enhanced through the opportunity to discuss content with my cohort members, as well as, the opportunity to complete Zoom sessions with Q and A. My professor was also quick to respond to questions via email and answered any questions the students might have had. All learning modules provided sufficient content and examples to support our learning.

Another positive emotion, *happiness*, a state of well-being and contentment, emerged 12 times in responses. One participant was happy about the online learning experience and shared, "I like to work at my pace and loved the ability to self-pace myself." Furthermore, the emotion of *pride* was spotted five times: "Participating in the online learning experiences caused me to grow in my belief in my ability to be self-taught."

In contrast to the positive emotions, *frustration* appeared seven times in participants' responses. For example, one participant stated,

There were also times that a guiding worksheet was mentioned but not provided in the course content. This was very frustrating to [me] as I wasn't sure if I was doing the assignment correctly and I knew that it was for a grade.

Disappointment also emerged seven times. A participant showed his/her deep sense of disappointment by stating,

I would have enjoyed having a discussion board topic that could be more relaxed and conversational as they are partly designed to replace in class conversation. There could always be those formal writing discussions but the lack of authenticity was concerning in some classes.

The emotion of *desire* was identified six times, in such statements as, "The one thing that I think is missing in online learning experiences is the ability to collaborate and network with other professionals because I miss the "face to face" discussions in the online learning experiences." *Yearning*, an intense longing for a better online learning experience, was found two times. One participant specified, "At the graduate level, there is a need for the pacing of courses to be more flexible considering most students have full-time jobs and often families that at times require more attention." Participants expressed the emotion of *wonder* two times: "It would have been beneficial if the professors also participated in the discussions; much like they do in face-to-face classes." The emotion of *unhappiness* was also seen two times, such as in this response where the participant candidly shared,

There was no "home base." I often feel like I'm feeling my way and I return to the degree handbook for guidance when I would appreciate a person to help me navigate. My academic adviser rarely responds to emails and our one phone conversation was brief and made me feel as if she had no idea who I am. She even said, "There are so many of you, I can't keep up." I don't have an option to attend office hours in person, so this was disheartening.

It is worth noting that dichotomous emotions were found within responses from individual participants. Proximity between the top two positive emotions (i.e., *enjoyment* and *happiness*) and the top two negative emotions (i.e., *frustration* and *disappointment*) showed that 12 (27%) participants' responses contained both *enjoyment and disappointment* and 10 (22%) contained both *enjoyment and frustration*.

The phase two analysis focused on different functionalities of emotions (i.e., activity emotion, outcome emotions, and directed affectiveness) (Derks et al., 2008). Thirty responses showed *directed affectiveness*, the recognition and sharing of emotions between students, the instructor, and peers. One stated: "I am grateful for my advisor [who] also served as my dissertation chair. Dr. A was always responsive, answered emails promptly and did not hesitate to call me when necessary. Three reasons: convenience, responsive professors, clear expectations." Similarly, "[The] instructor answer[ed] questions anytime and [was] available for her students." Quite a few participants also noted their appreciation for connecting with peers: "Going through the program you feel like a small family as you get to know the other classmates. It is nice to share ups and downs as educational leaders/administrators." *Activity emotion* was identified 22 times in responses that related to ongoing learning activities. For example, participants showed enjoyment

in fulfilling online learning activities of “discussion forums, and educational learning material” and stated, “I benefited from a clear outline that was provided each week.” The emotions related to the expectancy of outcome value of learning, *outcome emotion*, was also identified eight times. A participant stated,

I was provided with the ability to research topics that were pertinent to my current position in the school district I work for currently. Each topic I researched during individual courses had a direct benefit to my current work that made it real world applicable and it benefited students and teachers.

RQ2: Emotional Presence in Relation to Cognitive, Teaching, Social Presence, and Learner Characteristics

The reliability of the emotional presence items was first assessed using Cronbach’s alpha. The six emotional presence items were found to be highly reliable ($\alpha = .876$), which is consistent with Stenbom et al.’s (2016a) $\alpha = .74$ with a similar sample size ($n = 41$). A repeated measure ANOVA, with Greenhouse-Geisser correction, revealed a significant difference among four presences (see Table 2), $F(2.386, 107.38) = 49.514, p = .000$. partial $\eta^2 = .524$. Emotional presence was significantly different from cognitive presence, $t(45) = 9.627, p = .000$, social presence, $t(45) = 7.136, p = .000$, and teaching presence, $t(45) = 8.916, p = .000$. There was also a significant difference between social and cognitive presence, $t(45) = 3.646, p = .001$. No difference was found between teaching and social presence $t(45) = 1.735, p = .09$.

Table 2

The Descriptive Statistics of Cognitive, Teaching, Social, and Emotional Presence (N= 46)

Element	Mean	Standard Deviation
Cognitive Presence	4.33	.47
Teaching Presence	4.19	.64
Social Presence	4.03	.62
Emotional Presence	3.31	.84

In the item-level analysis of the six emotion measures (see Table 3), a repeated measures ANOVA, with Greenhouse-Geisser correction, revealed a significant difference among six emotional items, $F(3.746, 117.493) = 8.62, p = .000$. partial $\eta^2 = .161$. Further analysis showed no gender difference on overall emotional presence, $t(43) = 1.546, p = .129$, and no correlation between emotional presence and age, $r(45) = .165, p = .278$. Furthermore, no significant relationship was found between emotional presence with participants’ experiences using online computer technologies, $r(45) = -.132, p = .388$, experiences with social media and communication tools, $r(45) = -.042, p = .783$, and experiences with self-paced online learning, $r(45) = -.035, p = .821$.

Table 3

The Descriptive Statistics of Emotional Presence Items (N = 46)

Emotional Presence Items	Mean	SD
Emotion was expressed when connecting with other students.	3.28	1.00
I felt comfortable expressing emotion through the online medium.	3.50	1.05
Expressing emotion in relation to expressing ideas was acceptable in this course.	3.83	0.88
I found myself responding emotionally about ideas or learning activities in this course.	3.24	1.12
The instructor acknowledged emotion expressed by students.	3.04	1.23
The instructor demonstrated emotion in online presentations and/or discussions.	2.98	1.09

RQ3: Emotional Presence and Online Learning Satisfaction

A hierarchical multiple regression analysis (see Table 4) showed that emotional presence alone significantly predicted online learning satisfaction, $F(1, 44) = 4.847, p = .033$, adjusted $R^2 = .079$. The addition of cognitive, social, and teaching presence showed a significant improvement to the prediction, R^2 change = .186, $F(3, 41) = 3.553, p = .022$. The entire group of independent variables significantly predicted online learning satisfaction, $F(4, 41) = 4.088, p = .007$, adjusted $R^2 = .215$.

Table 4

Hierarchical Multiple Regression Analysis Summary Predicting Online Learning Satisfaction from Emotion, Cognitive, Social, and Teaching Presence (N = 45).

Variable	B	SEB	B	R^2	R^2 Change
Step 1				.10	.10
Emotional Presence	1.12	.51	.32*		
Constant	8.89	1.73			
Step 2				.29	.19
Emotional Presence	-.10	.66	-.03		
Cognitive Presence	1.46	1.44	.23		
Social Presence	.18	.82	.04		
Teaching Presence	1.53	1.12	.33		
Constant	-51	3.87			

* $p < .05$

Discussion

This study focused on non-traditional adult graduate students with an average age of 46 and examined the role emotion plays in their online learning process. Given the fact that the participants were full-time professionals in the field of education, our target was to explore how much emotional components and relationship building were involved in these non-traditional

learners' online learning and how our andragogical practices could be shaped using an emotional lens to achieve better educational goals among this particular student population.

Past research suggested that affective communication online could be similar to face-to-face communication despite the lack of non-verbal cues (Derks et al., 2008). In building a collaborative teaching and learning space online, emotion should be "at least as a ubiquitous, influential part of learning" (Cleveland-Innes & Campbell, 2012, p. 285). A strong argument has been made that emotional presence should exist as a separate, unique element in the CoI framework (Stenbom et al., 2016a). In this study, emotion emerged as a natural, yet powerful, element in the non-traditional students' reflections about their online learning experiences. Such emotional presence identified in qualitative responses was echoed by the quantitative results, where emotional presence appeared to be distinct from all other components of CoI. Cleveland-Innes and Campbell (2012) found emotion salient in online learning and argued that emotion, regretfully, remained unexamined in practice. The current result resonates with their position through observing emotional presence ratings being distant from those of other CoI presences, as well as the clear, natural presence of emotional expressions when participants talked about their overall online learning experiences. It might not be surprising that emotional presence had a much lower rating and a larger dispersion compared to cognitive, teaching, and social presence, similar to what Stenbom et al. (2016a) found. With an even lower emotional presence rating of 3.31, compared to the rating of 3.5 in Stenbom et al.'s study, non-traditional learners may be in more desperate need of emotional support in online learning. To better serve non-traditional students, innovations may be needed in online course design and instruction to include more emotional components. This area is worthy of much further exploration.

The dispersion of emotional presence ratings among the non-traditional participants was echoed by the dichotomous emotions participants demonstrated in reflecting their online learning experiences, i.e., *enjoyment/happiness* vs. *frustration/disappointment*. Positive emotions like *enjoyment/happiness* were clearly present when participants talked about how they benefited from online learning, such as "online learning allowed me to take classes around my fulltime job as an administrator." On the flip side, negative emotions such as *frustration* were evident when they complained that "there is a disconnect between coursework and the dissertation process." We noted a high proximity between positive and negative emotions among participants' reflections, oftentimes from the same individual. To some extent, this may explain participants' unfavorable ratings of emotional presence, compared to other presences. Meanwhile, while participants showed positivity in describing online learning experiences, there were also concerns and complaints. Such mixed emotions were honestly reflected in their wide-ranging emotional presence rating. Being a complex state of feeling that leads to physical and psychological changes in relation to human thoughts and behaviors, emotion has long lacked scientific consensus on its fundamental nature (Fox, 2018). Given such, it is important for online course designers and instructors to understand the inevitable mixed emotions online learners could have and to optimize instructional strategies accordingly.

It is not surprising that directed affectiveness turned out to be the most salient among the categories of activity emotion, outcome emotions, and directed affectiveness (Derks et al., 2008). Participants expressed their appreciation of instructors' responsiveness, the need for a close-knit family style cohort setting with peers, as well as their disappointment due to a lack of connection or sense of belongingness. Such emotions and mood shared between learners and the instructor highlight the importance of relationship building in creating a collaborative online learning

community. In exploring the relationship between CoI components and attrition rate in online programs, Boston et al. (2019) found that social presence, particularly an affective expression item (“Online or web-based communication is an excellent medium for social interaction”), accounted for 18% of the variance in students’ decisions about whether they would return the following term. Defined as how learners project themselves socially and emotionally into the community of inquiry as real people (Rourke et al., 1999), social presence, in fact, encompasses the construct of emotion under its conceptualization. With the emerging data on emotional presence in the current study, we would like to call for more attention to a more salient presence of emotion that appeared to be critical in the online environment. While the physical medium is missing in the virtual space, a stronger focus on emotional support and more efforts to build strong ties with learners become critically needed to compensate for the loss. A participant put it well: “The success or failure of the delivery of the instruction is wholly based on the facilitation of the instructor.”

This is especially true for adult, non-traditional learners. Being non-traditional in higher education often means constant battles among a full-time job, a family with kids, and study with endless readings and assignment deadlines. This study showed no variation in emotional presence rating by gender, age, or the amount of experience with online computer technologies, social media and communication tools, or self-paced online learning. Given the focus of this study on learners who are full-time professionals, we see a homogenous group with similar non-traditional characteristics who are in great need of instructional and psychological supports in online learning. Despite their intrinsic motivation, readiness to learn, and desire to apply prior work experience (Knowles, 1970), non-traditional learners need more supports in facing the real challenges in the online environment. That is why emotional presence turned out to be a good predictor of participants’ online learning satisfaction by itself. A participant put it in a simple, yet powerful, way: “I am satisfied with my online experience because the online faculty are available.” If students believe their professor is “always a phone call or email away,” they learn well online and appreciate challenging coursework.

Given the complex nature of emotion, we noted that emotional presence was contextual in this study. We found outcome emotions were evident in participants’ reflections, different from Stenbom et al.’s (2016b) claim that outcome emotion was “rare.” There was a sense of pride since “learning was accomplished through my on-line coursework.” There was also anxiety because of failure to complete the degree on time or not being able to get enough support in the transition from coursework to dissertation. It seems that participants care more about the eventual outcome of their online learning, instead of focusing on current coursework only. Given the characteristics of non-traditional learners in the graduate programs, especially those in the doctoral programs, participants focus on completing the degree and applying what they learn in the classroom to their workplace. Thus, learning outcomes played a more important role when participants reflected on their online learning experiences. Thus, in this setting where non-traditional students have degree completion as their goal, outcome matters as they expect to understand theories to drive better action as educators and leaders in the real world.

Limitations

While our findings provide insights regarding emotional presence in online learning environments, methodological limitations must be acknowledged. First, generalizability of our findings is limited since data were collected from 45 participants at a single institution. Since our participants at this institution may differ from those at other institutions and in other programs, these findings may not be generalized to the entire population of non-traditional adult graduate

students in online programs. In addition, the small sample size ($N = 45$) is another concern regarding the representativeness of these online learners, although statistical significance with this sample size shows validity throughout our findings. Thus, further investigations with larger samples are strongly recommended. Moreover, considering that our sample is from only one area of study—education, application of our findings to other disciplines is limited.

Implications for Further Research

Our findings should inspire future researchers to further explore the role emotion plays in building an online learning community. This study invites further investigation of what specific emotions students experience in online learning and how such emotions can be captured and expressed in online class design. Considering that the participants in this study are from graduate programs in the education field, we expect further studies to be done in diverse disciplines (e.g., social science, STEM, arts, etc.) to see whether individuals from different disciplines have different emotional needs in online learning. In addition, the online environment in this study is based on an asynchronous format, so it would be interesting to examine emotional presence in a synchronous learning environment. A comparative examination of synchronous and asynchronous online instruction could offer more insight regarding the effectiveness of different learning formats related to emotional presence in online learning.

Evidenced in our findings and given the fact that there are diverse cultural variations and influences on expressions and perceptions of emotions (Kitayama, 2006; Mesquita, 2003), exploring the influence of cultural differences and cultural variations on emotional presence in online environments is recommended. By capturing learners' cultural dynamics and cultural influences on their experienced and perceived emotional presence, in-depth understanding of online class communication and effectiveness of learning based on cultural differences may be added to online learning research.

As this study has shown that emotion may be particularly important for non-traditional adult learners, further studies could compare non-traditional versus traditional graduate students to provide understanding and information for both student groups. Since our findings are from a single institution at a large public research university located in the southwest, there is a limit to the generalizability of the current findings to non-traditional students in other regions. Therefore, a multi-institutional analysis with students from multiple regions is strongly recommended for more accurate and diverse interpretations drawing on rich data. Overall, further research could use a bigger sample size and examine different populations in various settings to expand our understanding of the role emotion plays in online learning.

Practical Implications

As students reported in this study, positive and negative emotions can coexist in online learning. It is important for instructors to be aware of diverse students' emotional responses and pay attention to their emotional needs in making efforts to increase positive emotions and decrease negativity. For online course designers, more communication components that target fostering students' emotional needs and building instructor-student relationships should be incorporated to structure a more effective online learning community. Learner characteristics and their academic needs should be carefully examined so more effective emotional elements can be put in place, from approaches to communication to grading policies. For online instructors, it is recommended that they find means of staying visible by posting personable pictures, video welcome messages, or providing video/audio office hours or assignment feedback. Also, being available outside of class

would help students feel connected and give them a sense of an online learning community. Being humane and emotionally supportive in online teaching could be the key under special circumstances, such as the COVID-19 pandemic.

According to CoI, there are multiple aspects to building a collaborative online learning community (Fiock, 2020); therefore, it is recommended that instructors intentionally design and deliver courses to support emotional presence, in addition to cognitive, social, and teaching presence. Along with the recommendations above, we would like to call for more timely and relevant support from administrators to build good foundations for online course design. Trainings or workshops for online instructors to learn how to build an online learning community would be beneficial.

Conclusion

As online learning continues to be a major topic in higher education, it is important to understand instructors' and learners' experiences in online classes. To achieve positive learning outcomes and satisfaction with online learning, it is crucial to investigate what online learners need and how educators can build an effective and collaborative learning community. The findings of this study will assist professors, advisors, and higher education administrators in better meeting the needs of online learners by providing insight regarding emotional presence and relationship-building in the online learning community. We hope that this study will assist educators, administrators, policymakers, and researchers in better understanding online learning so well-designed online classes can be built to foster online learners' emotional and educational needs while they learn and grow in online learning environments.

References

- Akyol, Z., & Garrison, D. R. (2008). The development of a community of inquiry over time in an online course: Understanding the progression and integration of social, cognitive and teaching presence. *Journal of Asynchronous Learning Networks*, 12(3), 3–23.
- Akyol, Z., Ice, P., Garrison, R., & Mitchell, R. (2010). The relationship between course socio-epistemological orientations and student perceptions of community of inquiry. *Internet and Higher Education*, 13(1–2), 66–68.
- Angelaki, C., & Mavroidis, I. (2013). Communication and social presence: The impact on adult learners' emotions in distance learning. *European Journal of Open, Distance and E-Learning*, 16(1), 78–93.
- Arbaugh, J. B., Cleveland-Innes, M., Diaz, S. R., Garrison, D. R., Ice, P., Richardson, J. C., & Swan, K. (2008). Developing a community of inquiry instrument: Testing a measure of the Community of Inquiry framework using a multi-institutional sample. *Internet and Higher Education*, 11(3–4), 133–136.
- Arghode, V. (2012). Role of empathy in instruction. *Global Education Journal*, 3, 128–143.
- Artino, A. R. (2008). Motivational beliefs and perceptions of instructional quality: Predicting satisfaction with online training. *Journal of Computer Assisted Learning*, 24(3), 260–270.
- Artino, A. R. (2012). Emotions in online learning environments: Introduction to the special issue. *Internet and Higher Education*, 15, 137–140.
- Bean, J. P., & Metzner, B. S. (1985). A conceptual model of nontraditional undergraduate student attrition. *Review of Educational Research*, 55(4), 485–540. <https://doi.org/10.3102/00346543055004485>
- Borup, J., Graham, C. R., & Velasquez, A. (2013). Technology-mediated caring: Building relationships between students and instructors in online k-12 learning Environments. In M. Newberry, A. Gallant, & P. Riley (Eds.), *Emotion and school: Understanding how the hidden curriculum influences relationships, leadership, teaching, and learning (Advances in research on teaching, Vol. 18)*, pp. 183–202, Emerald Group Publishing Limited, Bingley. [https://doi.org/10.1108/S1479-3687\(2013\)0000018014](https://doi.org/10.1108/S1479-3687(2013)0000018014)
- Boston, W., Díaz, S., Gibson, A., Ice, P., Richardson, J., & Swan, K. (2019). An exploration of the relationship between indicators of the community of inquiry framework and retention in online programs. *Online Learning*, 13(3). <http://dx.doi.org/10.24059/olj.v13i3.1657>
- Cardullo, V., & Burton, M. (2016). Building relationship through learning communities and participation in online learning environments: Building interactions in online learning. In L. Kyei-Blankson, J. Blankson, E. Ntuli, & C. Agyeman (Eds.), *Handbook of research on strategic management of interaction, presence, and participation in online courses* (pp. 448–471). IGI Global. <http://doi:10.4018/978-1-4666-9582-5.ch018>
- Castellanos-Reyes, D. (2020). 20 years of the community of inquiry framework. *TechTrends* 64, 557–560. <https://doi.org/10.1007/s11528-020-00491-7>
- Cleveland-Innes, M., & Campbell, P. (2012). Emotional presence, learning, and the online learning environment. *The International Review of Research in Open and Distance Learning*, 13(4), 269–292.

- Cleveland-Innes, M., & Garrison, D. R. (Eds.). (2010). *An introduction to distance education: Understanding teaching and learning in a new era* (2nd ed.). Routledge.
- Derks, D., Fischer, A. H., & Bos, A. E. (2008). The role of emotion in computer-mediated communication: A review. *Computers in Human Behavior*, 24(3), 766–785.
- Dewey, J. (1933). *How we think*. Heath.
- Fiock, H. (2020). Designing a community of inquiry in online courses. *International Review of Research in Open and Distributed Learning*, 21(1).
<http://dx.doi.org.proxy.tamuc.edu/10.19173/irrodl.v20i5.3985>
- Fox, E. (2018). Perspectives from affective science on understanding the nature of emotion. *Brain and Neuroscience Advances*, 2. <https://doi.org/10.1177/2398212818812628>
- Garrison, D. R. (2011). Article review - social presence within the community of inquiry framework. *International Review of Research in Open and Distance Learning*, 13(1), 250–252.
- Garrison, D. R., Anderson, T., & Archer, W. (2000). Critical inquiry in a text-based environment: Computer conferencing in higher education. *Internet and Higher Education*, 2(2–3), 87–105.
- Garrison, D. R., Anderson, T., & Archer, W. (2001). Critical thinking, cognitive presence, and computer conferencing in distance education. *American Journal of Distance Education*, 15(1), 7–23.
- Garrison, D. R., Anderson, T., & Archer, W. (2010a). The first decade of the community of inquiry framework: A retrospective. *The Internet and Higher Education*, 13, 5–9.
- Garrison, D. R., & Arbaugh, J. B. (2007). Researching the community of inquiry framework: Review, issues, and future directions. *Internet and Higher Education*, 10(3), 157–172.
<https://doi.org/10.1016/j.iheduc.2007.04.001>
- Garrison, D. R., Cleveland-Innes, M., & Fung, T. S. (2010b). Exploring causal relationships among teaching, cognitive and social presence: Student perceptions of the community of inquiry framework. *The Internet and Higher Education*, 13(1–2), 31–36.
- Giesbers, B., Rienties, B., Tempelaar, D., & Gijssels, W. (2014). A dynamic analysis of the interplay between asynchronous and synchronous communication in online learning: The impact of motivation. *Journal of Computer Assisted Learning*, 30(1), 30–50.
- Gilmore S., & Warren, S. (2007). Emotion online: Experiences of teaching in a virtual learning environment. *Human Relations*, 60(4), 581–608.
<https://doi.org/10.1177/0018726707078351>
- Grbich, C. (2007). *Qualitative data analysis: An introduction* (1st ed.). Sage Publications.
- Hall, D. P. (2016). *Online counselor training: Challenges and success in the experiences of online counselor educators* [Unpublished doctoral dissertation]. University of North Carolina at Greensboro. Greensboro, NC.
- Holton, E., Swanson, R., & Naquin, S. (2001). Andragogy in practice: Clarifying the andragogical model of adult learning. *Performance Improvement Quarterly*, 14(1), 118–143.

- Horzum, M. B. (2015). Online learning students' perceptions of the community of inquiry based on learning outcomes and demographic variables. *Croatian Journal of Education, 17*(2), 535–567.
- Huang, X., & Hsiao, E. (2012). Synchronous and asynchronous communication in an online environment: Faculty experiences and perceptions. *Quarterly Review of Distance Education, 13*(1), 15–30.
- Kitayama, S., Mesquita, B., & Karasawa, M. (2006). Cultural affordances and emotional experience: Socially engaging and disengaging emotions in Japan and the United States. *Journal of Personality and Social Psychology, 91*(5), 890–903. <https://doi.org/10.1037/0022-3514.91.5.890>
- Kim, Y. & Thayne, J. (2015). Effects of learner-instructor relationship-building strategies in online video instruction. *Distance Education, 36*(1), 100–114. <https://doi.org/10.1080/01587919.2015.1019965>
- Knowles, M. S. (1970). *The modern practice of adult education: Andragogy versus pedagogy*. New York Association Press.
- Koo, K. (2019). Is it real or not? Experiences of synchronous learning and training for counseling graduate students. In P. Semingson & J. Yoon (Eds.), *Educational technology and resources for synchronous learning in higher education* (pp. 129–150). IGI Global.
- Korpershoek, H., Harms, T., Boer, H. d., Kuijk, M. v., & Doolaard, S. (2016). A meta-analysis of the effects of classroom management strategies and classroom management programs on students' academic, behavioral, emotional, and motivational outcomes. *Review of Educational Research, 86*(3), 643–680. doi:10.3102/0034654315626799
- Lipman, M. (2003). *Thinking in education* (1st ed.). Cambridge University Press.
- Majeski, R. A., Stover, M., & Valais, T. (2018). The community of inquiry and emotional presence. *Adult Learning, 29*(2), 53–61.
- Marchand, G. C., & Gutierrez, A. P. (2012). The role of emotion in the learning process: Comparisons between online and face-to-face learning settings. *Internet and Higher Education, 15*, 150–160.
- Mesquita, B. (2003). *Emotions as dynamic cultural phenomena*. In R. J. Davidson, K. R. Scherer, & H. H. Goldsmith (Eds.), *Series in affective science. Handbook of affective sciences* (p. 871–890). Oxford University Press.
- Micari, M., & Pazos, P (2012). Connecting to the professors: Impact of the student-faculty relationship in a highly challenging course. *College Teaching, 60*, 41–47.
- Muilenburg, L., & Berge, Z. (2005). Student barriers to online learning: A factor analytic study. *Distance Education, 26*(1), 29–48.
- Murphy, L., Shelley, M., White, C., & Baumann, U. (2012). Tutor and student perceptions of what makes an effective distance language teacher. *Journal of Distance Education, 32*(3), 397–419.
- Nagai, A. (2015). Content analysis: It's not bean-counting. *Academic Quest, 28*, 472–479.

- National Center for Education Statistics. (2019). *Fast facts: Back to school statistics*.
<https://nces.ed.gov/fastfacts/display.asp?id=372>
- Oztok, M., Zingaro, D., Brett, C., & Hewitt, J. (2013). Exploring asynchronous and Synchronous tool use in online courses. *Computers & Education, 60*(1), 87–94.
- Pekrun, R. (2006). The control-value theory of achievement emotions: Assumptions, corollaries, and implications for educational research and practice. *Educational Psychology Review, 18*(4), 315–341.
- Phelps, E. A. (2006). Emotion, learning, and the brain: From classical conditioning to cultural bias. In P. B. Baltes, P. A. Reuter-Lorenz, & F. Rösler, (Eds.), *Lifespan development and the brain: The perspective of biocultural co-constructivism* (pp. 200–216). Cambridge University Press.
- Rodrigues-Ardura, I. & Meseguer-Artola, A. (2016). What leads people to keep on e-learning? An empirical analysis of users' experiences and their effects on continuance intention. *Journal of Interactive Learning Environments, 24*(5), 1030–1053.
- Rourke, L., Anderson, T. Garrison, D. R., & Archer, W. (1999). Assessing social presence in asynchronous, text-based computer conferencing. *Journal of Distance Education, 14*(3), 51–70.
- Sakiz, G. (2012). Perceived instructor affective support in relation to academic emotions and motivation in college. *Educational Psychology, 32*, 63–79. <https://doi.org/10.1080/01443410.2011.625611>
- Saldaña, J. (2009). *The coding manual for qualitative researchers*. Sage Publications.
- Seaman, J. E., Allen, E., & Seaman J. (2018). *Grade increase: Tracking distance education in the United States*. Babson Survey Research Group.
<http://onlinelearningsurvey.com/reports/gradeincrease.pdf>
- Shea, P., & Bidjerano, T. (2009). Community of inquiry as a theoretical framework to foster “epistemic engagement” and “cognitive presence” in online education. *Computers and Education, 52*(3), 543–553.
- Stenbom, S. (2018). A systematic review of the Community of Inquiry Survey. *Internet and Higher Education, 39*, 22–32. <https://doi.org/10.1016/j.iheduc.2018.06.001>.
- Stenbom, S., Hrastinski, S., & Cleveland-Innes, M. (2012). Student-student online coaching as a relationship of inquiry: An exploratory study from the coach perspective. *Journal of Asynchronous Learning Network, 16*(5), 37–48.
- Stenbom, S., Hrastinski, S., & Cleveland-Innes, M. (2016a). Emotional presence in a relationship of inquiry: The case of one-to-one online math coaching. *Online Learning, 20*(1), 1–16.
- Stenbom, S., Jansson, M., & Hulkko, A. (2016b). Revising the community of inquiry framework for the analysis of one-to-one online learning relationships. *International Review of Research in Open and Distance Learning, 17*(3), 36–53.
- Stone, P. (2001). Content Analysis. In *Encyclopedia of Sociology* (2nd ed., Vol. 1, pp. 417–422). Macmillan Reference USA.

- Swan, K., & Ice, P. (2010). The community of inquiry framework ten years later: Introduction to the special issue. *The Internet and Higher Education*, 13(1–2), 1–4.
- Swerdloff, M. (2015). Online learning, multimedia, and emotions. In S. Y. Tettegah, R. E. Ferdig, & M. P. McCreery, (Eds.), *Emotions, technology, and learning*. (pp. 155–175). Elsevier Science & Technology.
- Tettegah, S. Y., Ferdig, R. E., & McCreery, M. P. (2015). *Emotions, technology, and learning*. Elsevier Science & Technology.
- Tyng, C. M., Amin, H. U., Saad, M. N. M., & Malik, A. S. (2017). The influences of emotion on learning and memory. *Frontiers in Psychology*, 8, 1–22.
<https://doi.org/10.3389/fpsyg.2017.01454>
- Williams, L. S. (2017). The managed heart: Adult learners and emotional presence online. *The Journal of Continuing Higher Education*, 65(2), 124–131.
[doi:10.1080/07377363.2017.1320204](https://doi.org/10.1080/07377363.2017.1320204)
- Woods, K., & Frogge, G. (2017). Preferences and experiences of traditional and non-traditional university Students. *The Journal of Continuing Higher Education*, 65(2), 94–105.
- Xiao, J. (2012). Tutors' influence on distance language students' learning motivation: Voices from learners and tutors. *Distance Education*, 33(3), 365–380.
- Zydney, J. M., Denoyelles, A., & Kyeong-Ju Seo, K. (2012). Creating a community of inquiry in online environments: An exploratory study on the effect of a protocol on interactions within asynchronous discussions. *Computers and Education*, 58(1), 77–87.
<https://doi.org/10.1016/j.compedu.2011.07.009>