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EMOTIONAL PRESENCE IN COMMUNITY OF INQUIRY:

A SCOPING REVIEW AND DELPHI STUDY

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DEBORAH DELL

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Approval of Dissertation

The undersigned certify that they have read the dissertation entitled

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Dedication

A dissertation by its very nature is a collaborative process. Throughout this journey I have had the honor and privilege of being supported in many collaborative communities. These communities emerged in my cohort, and in the extended cohort of those who started before me and those who started after me at Athabasca University. I am forever grateful for the discussions, challenges and support of my fellow learners and lifelong friends. To all of my colleagues and workplace supports, you each have taught me so much about emotional presence, trauma informed pedagogy and resilience. All of those generously gifted teachings helped solidify my interest in this topic. To my dissertation committee, Dr. Pamela Walsh and Dr. Norman Vaughan and my supervisor Dr. Martha Cleveland-Innes, your endless encouragement, and helpful direction was invaluable. Lastly, to my son Keenan, the light of my life, I owe you so much, you extended so many forms of emotional nourishment to sustain me on this journey.

Abstract

Background: This dissertation reports on a two-part study regarding emotional presence in a Community of Inquiry. A scoping study of emotions research in online learning was used to frame a subsequent Delphi study about emotional presence in Community of Inquiry learning.

Methods: Inspired by COI philosophical foundations and pragmatic approaches, interactive participant engagement, multiple data sources were used to explore social and cognitive emotions in CoI learning and instructor and learner emotional presence indicators. Delphi panelists were experienced CoI learners (13) and facilitators (7).

Findings: The results reveal that emotional presence indicators in CoI are manifested in connection to all three presences. Mapping participant responses to the existing CoI framework results in the major finding that emotional presence is a diffuse presence, visible in relation to and overlapping with cognitive, social, and teaching presence indicators. It is enacted more purposefully in relation to the pedagogical practice of climate setting, supporting discourse, and regulating learning.

Contribution: This study may contribute to a more complex understanding of emotional presence as an intentional, deliberative discourse-based climate setting tool and self and co-regulative practice (macrocognitive) manifested through the intersections of teaching, cognitive and social presence.

Keywords: Community of Inquiry, emotions, emotional presence

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Chapter 1. Introduction

A 2019 faculty survey by Inside Higher Education shows that the proportion of faculty who are teaching an online course continues to grow at a steady pace (Jaschik & Lederman, 2019). Globally, the e-learning industry is on track for a compound growth rate of 7 % between now and 2025, attributed wholly to the rise of technology-enabled teaching techniques, as reported on the *Global Market Insight Report* (Bhutani & Bhardwa, 2019). Similar statistics in Canada point to the fact that online learning is growing exponentially, and traditional brick-and-mortar institutions are moving "aggressively" into online learning offerings (Bates, 2018).

> Shifting politics, globalisation, digitalisation, aging populations – the speed at which these changes are developing, and the breadth of their impact are testing the resilience of our social fabric, calling for a deeper reflection on the set of human values, ethics, and aspirations that bind us together, as well as the type of society in which we want to live (OECD, 2019).

For the last several years Organization for Economic Co-operation and Development (OECD) has emphasized the need for creating innovative learning environments, highlighting the need for the creation of education milieus that attend to the social and emotional nature of learning while simultaneously privileging engagement as a learning outcome (OECD, 2017). "World of *E*Motion" was the theme of the 2019 OECD forum. E and M's capitalization suggests a global recognition that emotions are an increasingly important consideration in our expanding digital world. The theme intimated that the forum would aim "to reflect on how globalization and digitalization are stirring perceptions, emotions, and responses that are reshaping the global, political and socio-economic landscape" (United International Associations, 2019, para. 4). These imperatives lead right into consideration of the purposes of education and higher

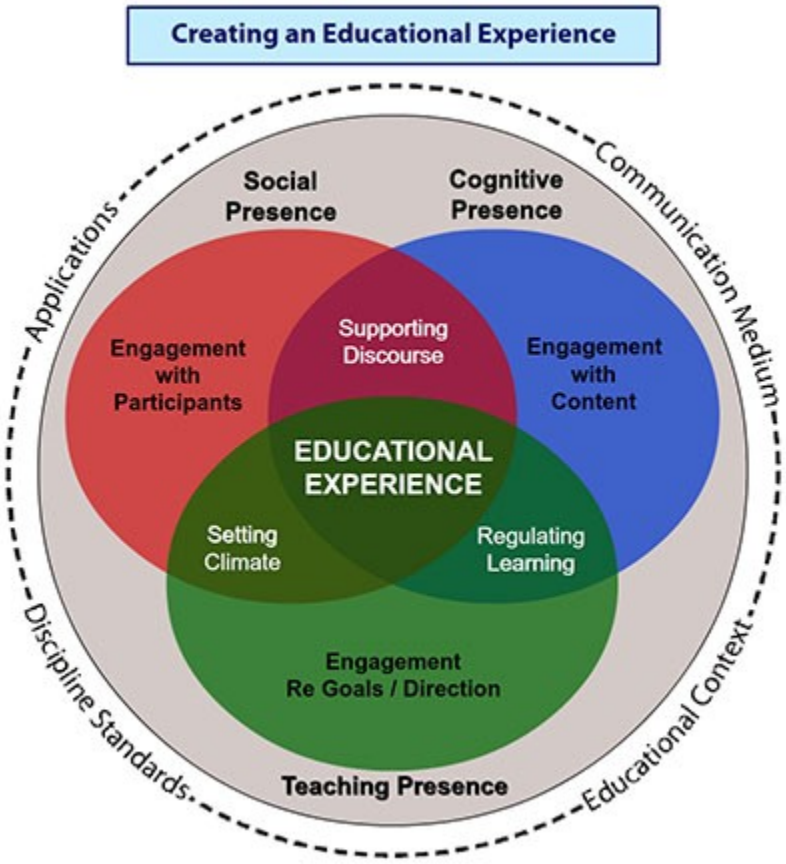
education specifically. Investigating human emotions in relation to higher education reform, building a sustainable education system, and contributing to a socially just world is recognized as a global imperative. This same obligation was echoed in the closing plenary of the recent world conference for online learning when George Siemens addressed the need to build hope, center sensemaking, meaning-making, and wayfinding as the primary goals of education in an increasingly technology-enabled world (Siemens, 2019).

The OECD report on well-being and digital life confirms that digital transformation provides new opportunities to change education models and build lifelong learners (OECD, 2019). While digital education in all its renditions was once the domain of a handful of dedicated distance education schools like Open University in the United Kingdom and Athabasca University in Canada, it is a rapidly growing field. A 2019 report by the Canadian Digital Research association confirms online course registrations and course offerings continue to grow at a steady pace (Johnson, 2019). This increase means an imperative for online education endeavors to be guided by learning frameworks that aid technology-based interventions (Anderson, 2016). Couple this worldwide imperative and growth with the fact that online learning is exploding across the globe as a direct result of the 2020 global COVID-19 pandemic. UNESCO estimates 1.38 billion learners have been impacted by face-to face school closures, and that many of the changes that resulted in online learning increases may be here to stay (World Economic Forum, 2020). At present, the most prominent learning framework in the online learning space is the Community of Inquiry Framework (Bozkurt, 2019).

The Community of Inquiry framework (CoI) (Figure 1.) is a now twenty-year-old collaborative constructivist informed distance education pedagogical framework that was developed over several years by Garrison, Anderson, and Archer (2000).

Figure 1

Community of Inquiry Framework



Note: Creative Commons Licensed Image from https://coi.athabascau.ca/

The CoI framework was informed and influenced by a substantial body of work in philosophy, psychology, and educational research, including the social constructivist, informed theories of Vygotsky, Dewey, and Lipman (Garrison et al., 2000). CoI is often referred to as one of the most cited and, therefore, influential frameworks concerning distance education practice and design (Williams, 2017). From an evolutionary standpoint, this influence is manifest in a robust research agenda.

A review of prominent online learning journals revealed the CoI framework as the most frequently used theoretical framework concerning distance teaching and learning research (Bozkurt et al., 2015). As of June 2021, Google Scholar citation metrics record over 6900 indexed citations. These citations proxy as indicators that the framework is well used in practice and publication. Despite its utility and popularity, increasing research indicates that the importance of emotions and their crucial impact on learning may not be fully articulated in the existing CoI framework (Cleveland-Innes & Campbell, 2012; Majeski et al., 2018)

Significance of the Study

Bates (2015) advises that there is over 100 years' worth of research into how people learn, but that this research rarely translates into changes in practice at the instructor level. Over the 20 years since the CoI framework was developed, some criticisms have directly addressed the need to expand the framework to encapsulate practical application better to increase student learning. This includes Garrison's recognition of the need to understand metacognition more fully (Akyol & Garrison, 2011).

Affective science is clear; studies abound about the importance of emotion in cognition and learning (Cavanagh, 2016; OECD, 2017). The CoI framework needs refinements to keep up with the changing knowledge that affective science provides.

The 2020 global COVID-19 pandemic added an additional significance to this study. As the world moved to quickly move face-to-face classes online, both learners and instructors were grappling with emotional issues of transition, change management and trauma informed teaching (Roman, 2020).

It is anticipated that the results of this study will offer an extended understanding regarding the presence of emotions and emotionally infused learning in an online Community of

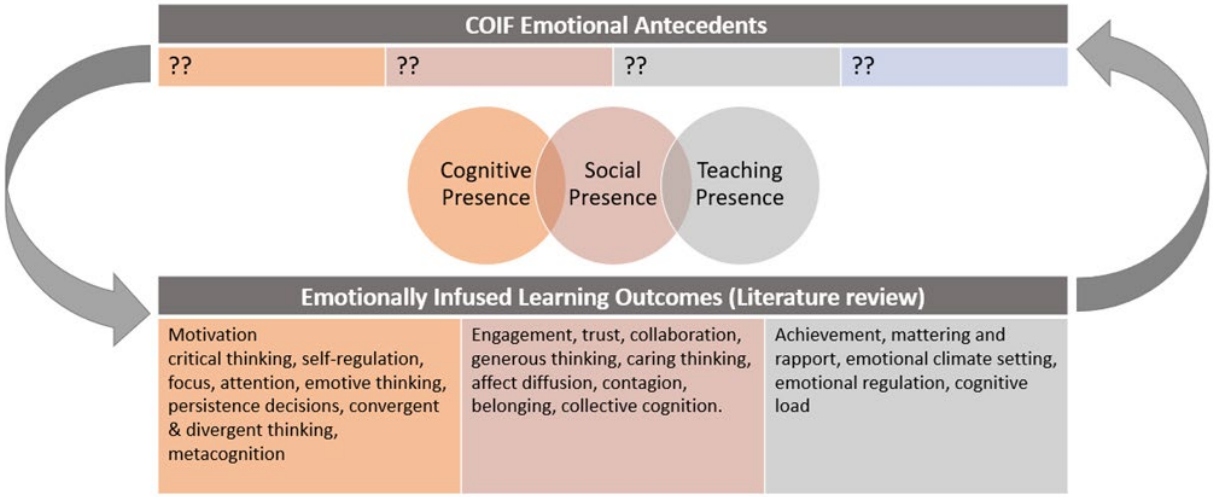
Inquiry. Supplementary to that, it will attempt to articulate which emotions are most prevalent and malleable through socially infused, emotionally present pedagogy. Key findings would potentially afford valuable knowledge to contribute to suggested adaptations and position the CoI framework to remain an important tool in the explosion of online learning discussed above.

The Theoretical Framework for the Proposed Study

The Community of Inquiry framework was born from a large body of work in social learning theory. Theoretical congruence between the historical roots of the Community of Inquiry framework and any study on adaptations is crucial. This study is framed by understanding the tenets of social learning theory, specifically how emotions are implicated in cognition and socially based learning situations (Dewey, 1910). Dewey articulated the primacy of cognition within emotion in an entire paper on the significance of the emotion-cognition connection in learning "emotion in its entirety is a mode of behavior which is purposive, or has an intellectual content, and which also reflects itself into feeling or affects, as the subjective valuation of that which is objectively expressed in the idea or purpose" (Dewey, 1895, p. 15). In keeping with these foundational precepts, this study investigated the socially situated emotions implicated in individual and collective cognition that result in a movement toward various types of learning behaviors. Figure 2. outlines the conceptual framework for the study.

Figure 2

Conceptual Framework



The literature review included in this proposal outlines many of the learning constructs that may be impacted by emotional experience and antecedents. Each of these is important within a Community of Inquiry learning trajectory; including but not limited to motivation, critical thinking, and self-regulation in the cognitive presence area; engagement, trust, and belonging in the social presence area; and climate setting and considerations for cognitive load in the teaching presence area.

Statement of the Problem

Studying emotions in learning is not an easy task since variations in terminology, taxonomies, and theoretical foundations proliferate. Educational research has historically drawn on primary research from other fields, including sociology and psychology, because concepts often straddle disciplines in human subject research (Seale, 2018). The literature in multiple areas clarifies that emotions are both present and necessary in online learning (Loderer et al., 2018). However, pedagogically planned emotional regulation, which includes increasing those

emotions helpful to learning and reducing or regulating emotions that may block learning in a Community of Inquiry, is not yet well understood.

The inclusion of a deeper understanding of emotional presence as a distinct presence in the Community of Inquiry Framework (CoI) is still in its preliminary stages. The scope and extent of emotional presence indicators within the Community of Inquiry, including emotional (self and other) experience and its management and regulation in an online CoI, has not yet been fully explored or articulated. The broader emotions literature speaks to causes, correlates, consequences, and collective affect diffusion; however, they remain mostly unexplored at a construct level in the CoI framework. A richer understanding could aid CoI faculty development and give an improved picture of the emotionally infused indicators of community, self-regulation, metacognition, deep learning, and collective affect diffusion and its importance to learning in online communities of inquiry.

Description of Project

This dissertation is divided into two main parts. The first a scoping study to establish the depth and breadth of theories of emotions that might be most congruent with an investigation of emotions in the Community of Inquiry framework. The second stage is a Delphi study that will help confirm the indicators of emotional presence from both a facilitator and learner perspective. Delphi studies involve multistage feedback mechanisms including surveys and focus groups to garner consensus on a given topic (Hasson et al., 2000). The detailed methodology is included in Chapter Three.

Research Questions

In order to explore some of the gaps outlined in the introduction this research has two overarching research questions and four sub-questions:

R1 What is known from the existing literature about emotions in online learning situations? (Scoping Study)

Secondary literature analysis will involve answering questions such as:

a. How are emotions defined?

b. What emotional taxonomies are used to delineate discrete emotions and emotional blends, and socially infused emotions**?**

R2. What Community of Inquiry framework indicators support the development and maintenance of emotional presence? (Delphi Study)

Secondary analysis will involve answering,

a. What pedagogical elements of CoI help regulate, build, or sustain academically important emotions?

b. What is the learning significance of the emotional climate in a CoI?

Delimitations and Limitations of the Study

This study's participants were drawn only from those who could be considered experienced in learning from or facilitating online distance learning using a Community of Inquiry framework.

Definition of Terms

Academic Emotions	Academic emotions are classified along two valence scales: positive valence, including enjoyment, hope, and pride—negative valence, including anger, boredom, and anxiety. Academic emotions act as catalysts to promote elf-regulation, motivation, memory, cognitive resources, sense of belonging and academic achievement (Hayat, Salehi, & Kojuri, 2018).

Affect	Often used interchangeably with emotions, affect can refer to overall mood or emotional energy.
The Community of Inquiry framework	A 20-year-old framework for the design and development of online learning communities (Garrison et al., 2000).
Emotions	"Emotions are seen as multi-component, coordinated processes of psychological subsystems including affective, cognitive, motivational, expressive, and peripheral physiological processes" (Pekrun, 2006, p. 316).
Emotional Contagion	"the process by which exposure to others' emotions leads people to express emotions that are more similar than they otherwise would have been to others' emotions" (Goldenberg & Gross, 2019, p. 4).
Meaning Making	A constructivist view of learning including "the process of how individuals make sense of knowledge, experience, relationships, and the self" (Ignelzi, 2000, p. 5).
Online Distance Learning	Learning that takes place at a distance, utilizing various forms of technological and internet-based interface.

Summary

Terry Anderson, one of the originators of the CoI model, recently discussed the imperative "for the communities of inquiry model to evolve into a learning model, that recognizes the importance of motivation, self-efficacy, and personal skills in effective communities of inquiry" (Anderson, 2018, para. 1). This evolution can only occur if affective science is more broadly understood, articulated, and integrated into the articulation of theoretical

foundations and the CoI framework. Setting up the online space for learning is not enough. Learning is a highly emotional endeavor, and emotions are implicated in the deepest levels of socially informed cognition and learning. “Having insight into one's own and others' personal, relational dynamics and group dynamics is critical in facilitating online learning environments” (Bentz & Lazarevic, 2015, p. 68). The worldwide interest in emotions and emotionally present education and participation in society leads to a need to support the investigation of human emotions in relation to community-based learning. There is a need to investigate how an improved understanding might inform higher education reform, building a sustainable education system, and contributing to a socially diverse and just world.

Chapter 2: Review of Relevant Literature

"Emotions are seen as multi-component, coordinated processes of psychological subsystems including affective, cognitive, motivational, expressive, and peripheral physiological processes" (Pekrun, 2006, p. 316). This definition's complexity renders an unequivocal notion that human emotions must profoundly impact human learning at all stages on the learning continuum. Indisputably, a large body of literature confirms that learner emotions impact all aspects of learning (Cavanagh, 2016). This includes specific research related to learning adjustment (Conrad, 2002; D'Errico et al., 2018); confidence, achievement (Pekrun et al., 2002, 2019); motivation (Artino, 2012; Huang, 2011); focus and attention (Lipman, 2003); engagement (D'Errico et al., 2016); persistence decisions (D'Errico et al., 2018); social learning (Immordino-Yang, 2011), and self-regulation (Pekrun et al., 2002). Therefore, emotional regulation and emotional climate setting is a fundamental consideration in the design and facilitation an online Community of Inquiry (CoI).

The study of emotions is not easy since variations in terminology, taxonomies, and theoretical foundations abound. Educational research has historically drawn on primary research from other fields since concepts often straddle disciplines in human subject research (Seale, 2018). Therefore, to do this literature review, exploration must entail interrogation of what is known about emotions and learning from a multi-disciplinary perspective, including research from cognate fields such as psychology, sociology, and neurobiology.

Key areas of research literature review include understanding previous research on emotions and their relationship to learning, emotion taxonomies, specifics in online or technology-enabled education settings, including some of the discoveries around emotional contagions and socially infused emotions. This literature review is framed within the Community

of Inquiry's theoretical framework and its historical and more recent treatment of emotions through a limited but growing body of research on emotional presence. While it is true that the CoI framework is one of the most influential frameworks in distance education, it is necessary to constantly reflect on changing needs and understandings "as a result of constant changes, we should keep the definition of both DE and ODL up-to-date to better explain the needs of the global teaching and learning ecosystem" (Bozkurt, 2019, p. 252).

Emotions Taxonomies

Rienties and Rivers (2014) suggest that "measuring emotions in learning analytics brings significant epistemological, ontological, theoretical and practical challenges" (Rienties & Rivers, 2014, p. 6). Before embarking on a study of emotions, it is necessary to interrogate the literature on how emotions have been defined, labeled, and operationalized in previous studies. "For better or for worse, the emotion classification system shapes the metastructure of emotion theory and experimentation" (Kron, 2019, p. 3). There are several taxonomies and categorization systems that have influenced prior research on emotions. While it is true that classification provides a necessary framing to the research, it can also constrain the data gathering (Kron, 2019). This constraint has been noted in previous studies of emotional presence (Cleveland-Innes & Campbell, 2012). This literature search for taxonomies unveiled many competing models and a great deal of fragmentation, though attempts at universal classification have been going on for over 50 years (Cowen et al., 2019). Table 1. outlines several of the emotional taxonomies that educational emotions research has relied on.

Table 1

Common Emotions Theories

Theory Name	Originator	Theoretical Family	Scales	Year
Schlosberg	Harold Schlosberg	Appraisal	Pleasantness–unpleasantness, attention–rejection" and "level of activation	1954
Wundt	Wilhelm Wundt	Appraisal	Pleasurable/ unpleasurable arousing or subduing/ strain or relaxation	1897
Circumplex Model	James Russell	Appraisal	Arousal and valence dimensions	1980
Component Process Model	Klaus Scherer	Appraisal		1981
Plutchik model	Robert Plutchik	Hybrid	Intensity	1981
Self -Determination Theory	Ryan & Deci			2000
Theory of Situational Interest	Renniger & Hidi			2016
Conceptual Act Theory/Theory of Constructed Emotion	Lisa Feldman-Barret	Constructionist	Valence/Arousal/social influence	2017

Taken together, most emotions theories fall into one of three main categories: basic emotions theories, constructionist emotions theories, and appraisal type theories (Scherer, 2015). Basic emotions theories are those that subscribe to the idea that there is a universal set of emotions that are biologically and psychologically basic, there is little emphasis on social formation (Wilson-Mendenhall et al., 2013). Appraisal theories incorporate more cognition recognition and subscribe to the idea that the way we perceive a situation is a stimulus to the resultant behavioral response (Pekrun, 2006). Finally, constructionist theories integrate much of appraisal theory in terms of cognitive influence on emotions but recognize that the construction of emotion is quite malleable through social interaction (Barrett, 2016).

Perhaps the most widely used educational research theory for understanding emotions in the learning process is Pekrun's control value theory of emotions (CVT). This emotional taxonomy is specific to the most common emotions that are experientially identified during a learning endeavor. In CVT, emotions are scaled along a continuum of positive to negative as well as along a continuum of energy from activating to deactivating (Pekrun, 2006; Pekrun, Frenzel, Goetz, & Perry, 2007). Control value theory is based on cognitive appraisals of choice and personal value of "achievement emotions, including activity-related emotions such as enjoyment, frustration, and boredom experienced at learning, as well as outcome emotions such as joy, hope, pride, anxiety, hopelessness, shame, and anger relating to success or failure" (Pekrun, 2006, p. 315). The theory has a robust research agenda, and more recently, a body of research related to its application to online learning (Daniels & Stupnisky, 2012; You & Kang, 2014). While the model does offer a tidy heuristic for exploring emotions in academic settings, there may be some limitations related to research around the existence and labeling of discrete emotions (Barrett, 2016).

While many theories and taxonomies, including Pekrun's, take a polar view and plot emotions along a valence continuum of negative to positive, more research is beginning to realize that this may be a false dichotomy in some cases and that, in reality, all emotions are just internal data. Further, it is clear that sometimes what have been traditionally labeled as negative emotions have an important place as precursors to meaningful learning (Artino & Jones, 2012; Garrison, 2017; B. Lehman et al., 2012; Lipman, 2003; Pekrun et al., 2002). In line with this line of thinking, Lindebaum and Jordan (2012) suggest that emotions researchers should take a more nuanced view and consider research that investigates less symmetrical emotional-behavioral coupling (Lindebaum & Jordan, 2012) and more mixed states that include a broader perspective

than just intra-individual manifestations (Moeller, 2018). With all of this in mind, the scoping study (Arksey & O'Malley, 2005) as the initial stage of this study will elucidate which emotional theory might offer the strongest connection to social-emotional learning and therefore may provide a recent and cogent theoretical taxonomy to frame current self-report emotion studies in COI.

Emotions in Learning and Affective Science

From a multi-disciplinary perspective, there is an array of evidence from sociology, psychology, and neuroscience that supports the idea that cognition and emotion are intimately entangled (OECD, 2017). A significant body of research has concluded that "emotional cues, emotional states, and emotional traits can strongly influence key elements of on-going information processing, including selective attention, working memory, and cognitive control" (Okon-Singer et al., 2015, p. 8). Emotions are crucial learning ingredients at all stages of the learning journey. Everything from early engagement, sustained motivation, and long-term memory strengthening has an emotional basis (Cavanagh, 2016). Lipman outlined this as a distinctive consideration in the original articulation of a CoI when he delineated the difference between educating about emotions and emotions as a sort of a centrifugal force in learning itself (Lipman, 1991). Lipman draws on the work of Elgin to assert that emotions are both formal and functional in learning and that present-day scholars need to move away from the cognition-emotion dichotomy and embrace current scientific understanding. "Therefore, we should vigorously oppose the dualistic approach that considers the cognitive and the affective to be separate and autonomous functions that merely play off one another contrapuntally" (Lipman, 2003, p. 131). This is an important consideration in Community of Inquiry learning,

especially if we are to understand how cognitive presence is mediated by both social and teaching presences.

Emotional Contagion

Building on the body of work that establishes the primacy of individual emotions and their effects at all stages of the individual learning process, another consideration that is very relevant to Community of Inquiry is the existence of more socially infused emotional conditions and learning climate. Though the work on emotional contagion appears to be a new and emerging field, there are some parallels to sociologist Emile Durkheim's early works and his notion of "collective effervescence" (Carls, 2021). Emotional contagion is a descriptor for shared affective states; it is defined as "the process by which exposure to others' emotions leads people to express emotions that are more similar than they otherwise would have been to others' emotions" (Goldenberg & Gross, 2019, p. 4). Emotions researchers have concluded that the social nature of emotions has essential considerations specific to the educational milieu. "First, emotion and cognition are intertwined and involve an interplay between the body and mind. Second, social processing and learning happen by internalizing our subjective interpretations of other people's beliefs, goals, feelings, and actions, and vicariously experiencing aspects of these as if they were our own" (Immordino-Yang, 2011, p. 98).

In her book *The Spark of Learning*, Sarah Rose Cavanagh dedicates an entire chapter to collating research on the idea of emotional contagion. Cavanaugh concludes, "we get human beings who are powerfully motivated by the development of social connections… and highly susceptible to the contagious effects of other people's emotions and goals" (Cavanagh, 2016, p. 54).

While both Immordino-Yang and Cavanagh's work is focused mainly on face-to-face classrooms, the idea of online emotional contagion is also sparking an early research agenda. Although much of this developing research is related to cautions connected to the evils of groupthink and social media, there is an accruing body of work that can inform how to use emotional contagion purposefully through pedagogical practice. This body of work may influence recognition about why collective emotions may be a factor in working groups like those created by an online Community of Inquiry (Schweitzer & Garcia, 2010).

Emotions in Technology Enabled Learning

Distance Education (DE) and online distance learning (ODL) are fields that are continually evolving (Bozkurt, 2019). As technology-enabled affordances change, so too does the depth and breadth of our understanding of how people learn in technology-enabled situations. While not explicitly built on the theoretical framework of CoI, there is a growing body of literature on how emotions manifest specific to online learning situations. "Emotions have important effects on learning, engagement, and achievement in online settings" (Artino, 2012, p. 137). This view was recognized as early as 2002 in a study by Conrad, who used open-ended survey methodology to conclude that early engagement emotions were particularly influenced by the organization and availability of materials (Conrad, 2002). Daniels and Stupinsky (2012) concurred that when investigating emotions in online learning, emotions that are influenced by technology itself are important considerations. A very recent meta-analysis of the pervasive nature of emotions in online learning concludes that emotions are important in all types of online learning; the review of 186 studies determined that while emotional manifestation levels might be different across types of online learning, the function of emotion as a driver of learning remains consistent (Loderer et al., 2018).

Digital Emotional Contagion/Affect Diffusion

Digital emotional contagion occurs in networked settings "when a perceiver's emotions become more similar to an expresser's emotions over time due to the influence of the expresser's emotions" (Goldenberg & Gross, 2019, p. 9).

Technology-enabled learning spaces that are designed for cohort or community-based education must consider the existence and impact of all kinds of emotional presence, including a broader understanding of how socially infused and networked learning needs an expanded understanding of emotions and their manifestations in the collective. This is especially important when the learning philosophy requires the development of a trusting learning community, such as is the case with the Community of Inquiry framework. At least two recent studies have drawn surprising and important conclusions about the profound effects of digital emotional contagion. In an empirical study about emotions and retention in MOOC's, Xin and colleagues (2019) used control value theory as a theoretical framework and concluded an important but surprising finding, that emotions that arose as a result of exposure to peers writing had a more significant effect on their persistence decisions than did their own expressed emotions. This supported findings in an earlier MOOC study by Yang and colleagues, who found in particular that being exposed to peer confusion might increase dropout rates (Yang et al., 2016). Although not generalizable from MOOCS to other forms of online learning, these findings are important considerations that may or may not be replicated in more community-focused online learning formats like CoI. These studies support the notion that technology-enabled learning spaces that are designed for cohort or community-based education would be wise to consider the existence and impact of all kinds of emotional presence, including a broader understanding of how socially

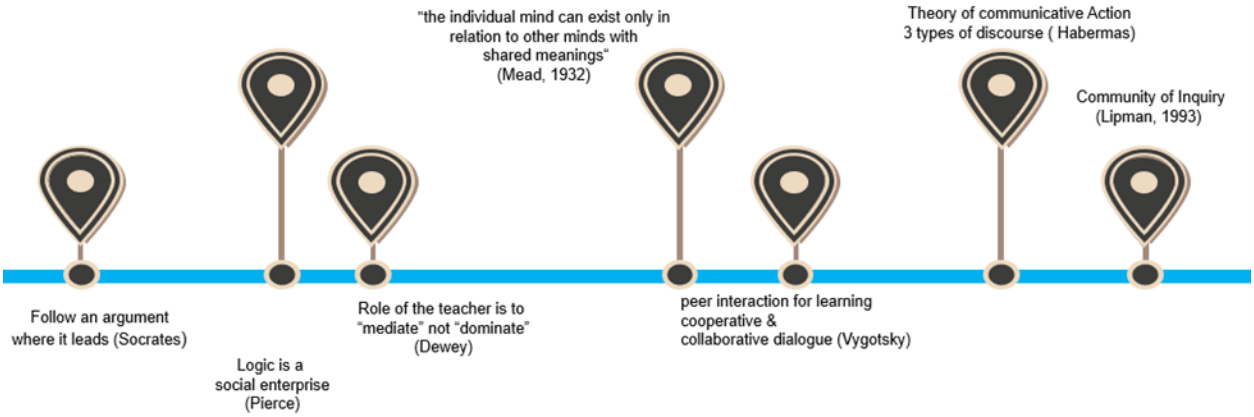
infused and networked learning needs an expanded understanding of emotions and their manifestations in the collective.

Roots of Community of Inquiry

The idea of Community of Inquiry (CoI) and its foundations as a discussion-based teaching pedagogy or shared learning space has its roots in early Greek Philosophy, as far back as Socrates and his notions of deliberation as foundational to learning (Smith, 2013). George Herbert Mead (1932) and his socially informed learning theories were also instrumental in the early foundational thinking. Though the Community of Inquiry lexicon was made popular as a pedagogical intervention by the work of Lipman, he was quick to pay homage to Mead as the first to fuse *community* and *inquiry* as a specific pedagogical strategy. A primary emotional ethos of CoI was that "students can acquire significant practice in mediating with one another and in arriving at settlements only if they are first confronted with problems that speak to them directly and are genuinely unsettling" (Lipman, 2003, p. 106). Lipman dedicated an entire chapter to the role emotions play in facilitating cognitive growth, which he maintains is an essential element of the original Community of Inquiry. Drawing again on the work of Elgin (1996), Lipman articulates concurrence with the fact that emotions are essential to learning in four functional and essential ways: "imbed beliefs,…provide frames of reference…help us focus…, provide a source of salience and direct attention" (Lipman, 2003, p.128). Both Elgin and Lipman were concluding that emotions are so important to learning that emotive thinking is an important part of learning in the community. Figure 3 depicts a timeline of foundational philosophical thinking that influenced the construction of the Community of Inquiry Framework.

Figure 3

Timeline of CoI Foundations



The Community of Inquiry Framework

The Community of Inquiry (CoI) framework is a now twenty-year-old collaborative constructivist informed distance education pedagogical framework that was developed over several years by Garrison, Anderson, and Archer (2000). The CoI framework was informed and influenced by the aforementioned substantial body of work in philosophy, psychology, and educational research, including the social constructivist informed theories of Vygotsky, Dewey, and Lipman (Garrison et al., 2000). It is often referred to as one of the most cited and, therefore, influential frameworks in relation to distance education practice and design (Williams, 2017). From an evolutionary standpoint, this influence is manifest in a robust research agenda.

The constructs contained within the CoI framework have been developed into a widely used survey instrument (Arbaugh et al., 2008) that has been the subject of a large body of validation studies, primarily investigating structure at the presence level, and more recently confirming the validity of the elaborated categories within the presences (Caskurlu, 2018; Heilporn & Lakhal, 2019).

At a construct level, the CoI articulates three overlapping forms of human presence that coalesce to impact deep, meaningful learning through the development and sustenance of an online learning community. *Social presence* was originally defined as "the ability of participants in a Community of Inquiry to project themselves socially and emotionally, as real people (i.e., their full personality), through the medium of communication being used" (Garrison et al., 2000, p. 94). Over the years, the original authors have amended the working definition of social presence to include a much more nuanced recognition of collaborative emotional climate "Social presence is the ability of participants to identify with a group, communicate openly in a trusting environment, and develop personal and affective relationships progressively by way of projecting their individual personalities" (Garrison, 2017, p. 41). This definition adjustment represents a significant change at a construct level, though it is not clear if this change has been adequately reflected in the Community of Inquiry instrument or in subsequent studies of social presence in CoI.

Cognitive presence "is defined as the extent to which learners are able to construct and confirm meaning through sustained reflection and discourse in a critical community of inquiry" (Garrison et al., 2001, p. 11). Rounding out the triad *teaching presence* is concerned with design and facilitation as "a means to an end to support and enhance social and cognitive presence for the purpose of realizing educational outcomes" (Garrison et al., 2000, p. 90).

Over the years since CoI was established, there have been several suggestions for the expansion of the three original presences (Cleveland-Innes & Campbell, 2012; Kozan & Caskurlu, 2018; Majeski et al., 2018; Shea et al., 2013). There have been recommendations that learner presence or instructor social presence is not articulated strongly enough (Richardson & Lowenthal, 2017; Shea et al., 2013). In its original form, the idea of emotions was not ignored,

but certainly, the prominence of emotions and social-emotional indicators within CoI was not fully articulated. Following the trajectory of what has been discussed in terms of the importance of emotions in the totality of the learning experience, there have been several calls to expand the CoI to include a more robust articulation of how emotions are both present and important in the establishment and maintenance of community and community-based collaborative constructivist learning. Attention needed in this area is clear as nearly half of the indicators of social presence could, in fact, be placed squarely in an emotionally focused category (Rourke et al., 1999). This criticism is in line with a very recent construct review of the CoI that concluded the CoI instrument itself should be redesigned to better articulate and measure the foundational principles and definition of community-based and peer-influenced teaching presence. A finding that was echoed in a systematic review of 103 studies that used the CoI instrument as a data-gathering tool (Dempsey & Zhang, 2019). This suggestion is timely as a very recent construct validation study by Hielporn and Lakhal (2019) appears to rely on the 2000 construct articulation by Garrison rather than the more recent and more emotionally informed articulation by Garrison (2009).

There have been specific calls for change regarding the formulation of the three presences in regards to emotions, some in general terms about the inclusion of a broader understanding of emotion (Joksimovic et al., 2014; Peacock, 2015; Perry & Edwards, 2005) and others with specific calls to give prominence to the role of emotions in online learning by broadening the CoI framework to include a robust articulation of a specific emotional presence (Cleveland-Innes & Campbell, 2012; Majeski et al., 2018).

Kilis and Yıldırım (2018), in a recent article, posited a regulatory presence and (Bluteau 2020) suggesting a “therapeutic presence” is a further indication that scholars agree that

something is missing. Moreover, on detailed inspection of each of these suggestions, it is easy to see that "something" universally has an emotional or affective base. Garrison himself, in a recent review, articulates the idea that the Community of Inquiry Framework in its original form could be improved by a research agenda that interrogates emotions and how they influence learning in groups. Garrison (2017) suggests in this vein that "what is less clear is what creates positive emotion and how emotion influences collaborative approaches to thinking and learning" (p. 40).

In the case of the CoI framework, one of the recent developments is attention to adding a supplementary and specific emotional presence. This suggestion may, in fact, quell some of the criticisms of the CoI framework that have been leveled by such authors as Annand (2011) and Rourke and Kanuka (2009), who jointly contend that the original CoI is not robust enough to account for deep and meaningful learning. A very recent study has shed important light on this criticism, offering that when it comes to cognitive presence, it is wholly the affectively informed parts of that domain that are being implicated in the integration and resolution phase of cognitive presence and, therefore, the deepest portions of the learning (Rolim et al., 2019). This finding is in line with an earlier study that was conducted to develop a new tool for measuring the idea of community cohesion online. Zimmerman and Nimon (2017) used the CoI instrument to validate *the online student connectedness survey*. After factor validation, they came to a significant and important finding "that cognitive presence is highly correlated to feelings of connection" (Zimmerman & Nimon, 2017, p. 40).

Emotional Presence

Since my study focused specifically on emotional presence as a very specific and incipient construct within the Community of Inquiry framework, it was necessary to interrogate all the published literature in this niche. An EBSCO search (Sept 21, 2019) using "emotional

presence" and "Community of Inquiry" as subject terms for the period of 2000-2019 returned 38 results. After abstract review, 23 articles were selected because they were specific to the terminology, including "*emotional presence"* and *CoI.* Articles related to the relationship of inquiry, a derivative of CoI, for one-on-one situations were excluded. After a full reading, eight articles (see Table 2) that were discussing the specific construct of emotional presence in CoI remained.

Table 2

Existing Studies of Emotional Presence

Study	Author	Finding	Year
The role of emotion in creating instructor and learner presence in the distance education experience	Lehman	Articulates 10 emotions research questions	2006
Developing an emotional presence scale for measuring students' involvement during e-learning process	Kang, Kim &Park	Three constructs of EP offered Perception, expression, and management of emotion	2007
Emotional presence, learning, and the online learning environment	Cleveland-Innes & Campbell	A distinct emotional presence exists	2012
Communication and social presence: the impact on adult learners' emotions in distance learning	Angelaki & Mavroidis	Peer communication significant in emotional transition	2013
Emotional presence and mobile learning: learner-driven responses in a wireless world	Cleveland-Innes, Ally, Wark, & Fung	Confirmation of EP in Mobile learning COI	2013
Emotional presence in online learning scale: A scale development study	Sarsar & Kisla	Development of an EP scale	2016
The managed heart: Adult learners and emotional presence online	Williams	Conceptual paper	2017
The community of inquiry and emotional presence	Majeski, Stover, & Valais	Conceptual paper emotional presence and emotional intelligence	2018

At this stage, most of the research on emotional presence within the CoI framework has been informed by affective science literature reviews and, as a result, is of a conceptual nature. The first academic discussion of the importance of emotions in relation to online presence specifically was in a literature review by Lehman (2006). Lehman outlined the crucial role of emotions in distance and blended learning. She ended the review by articulating ten important

questions that need to be answered about emotions and how they impact the general construct of *presence* in online learning. Employing more rigorous research methods four later studies specific to the CoI framework conclude the necessity to expand the presences from a triad framework to a quadrant framework and include the addition of emotional presence as a distinct entity (Cleveland-Innes et al., 2013; Cleveland-Innes & Campbell, 2012; Kang et al., 2007)

Williams (2017), in a descriptive case study, reaffirms the earlier Community of Inquiry work of Lipman and contends that purposeful emotional infusion can be beneficial to both metacognition and deep learning. Cleveland-Innes and Campbell (2012) tackle the issue from a factor analysis methodology and use Robert Plutchik's (2003) emotional taxonomy as a guiding frame. Their study spanned 19 courses, with 217 students and identified 17 different emotional states. They concluded that there is a significant reason to broaden the research agenda on emotional presence in CoI. They completed their study with a definition of the suggested presence expansion. "Emotional presence is 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" (Cleveland-Innes & Campbell, 2012, p. 283). Two years later, Stenbom and colleagues, elucidated a case study more focused on a coaching derivative of the CoI framework and concluded that there is a distinct emotional presence (Stenbom et al., 2016).

Lastly, Majeski (2018) and colleagues in a conceptual paper highlight a potential synergy between existing theories of emotional intelligence and a conceptual model of emotional presence. They cite Daniel Goleman's (1995) popular emotional intelligence model as a perhaps complementary model. While I find it an interesting connection, in the case of emotions and learning, the Goleman model of emotional intelligence may not be the most appropriate

selection. The model focuses largely on controlling emotional situations (Scheindlin, 2008), rather than the more educationally important task of taking energy and wisdom from that internal data that particular emotional blends might offer to the task of informing cognition, metacognition, and deep learning.

As a researcher, I concur with Cleveland Innes and Campbell (2012) that it is no longer appropriate to leave emotions as unconscious and unexamined. There is a necessity to align with the purposes of "reflective pedagogy designed to bring cognition to consciousness. Learners need to understand the role of emotion in life and in learning to realize their benefits" (p. 285).

All four of these studies point to imperative considerations in this important work. Everything from emotional taxonomies and labels, theories of emotion and cognition, and Community of Inquiry purpose as a model for planning to involve for deep and meaningful learning are considerations that must be addressed if the primary goal is to inform emotional presence in pedagogical practice.

Emotionally Present Pedagogy

When it comes to the elements of emotional presence that are largely in the facilitators' control, the literature has less to offer. Cleveland-Innes (2020), in a recent chapter in *Rethinking pedagogy for a digital age: Designing for 21st-century learning,* outlines several pedagogical considerations for facilitator applications of emotional presence, including normalizing the use of emotions language and supporting emotional expression. Bruya and Ardelt (2018) likewise studied pedagogical elements that can help engage learners at an emotional level. Rolim and colleagues in a very recent study based on the Community of Inquiry framework have elucidated that managing emotion in the early stages of a learning endeavor can lead to the more integrated use of emotion in learning, specifically in the later stages of the elements of cognitive presence

(Rolim et al., 2019). This finding, in some ways, echoes a study from a decade earlier that suggested facilitating in order to increase learner comfort in the early stages of a CoI may increase indicators of cognitive presence (Shea & Bidjerano, 2009).

These two taken together may reveal some of why Garrison's own early study of the CoI framework found that students often do not reach the later levels of cognitive processing (Garrison et al., 2001).

While not specifically about the CoI framework, a recent meta-analysis of 78 studies related to academic emotions and motivation found that mastery-based interventions could affect emotional engagement in learning. In this meta-analysis, the conclusion was that students experienced more positive academic emotions like curiosity and enjoyment when they were focused on more individual mastery goals rather than normative standards in the learning environment (Huang, 2011).

Chapter Summary

The inclusion and purposeful expansion of the Community of Inquiry framework is still in its preliminary stages, and the breadth and depth of emotional indicators within the Community of Inquiry framework have not yet been fully articulated. These collective calls for expansion and improvement make operational sense, given that the original Community of Inquiry construct on which the online version of the CoI framework is based had an in-depth treatment of emotions as foundational to social learning (Lipman, 2003). Frameworks, by their very nature, are established for the expressed purpose of simplifying and giving language to complexity. The CoI framework, in its attempt to simplify and articulate the conditions needed for successful computer-mediated learning, may have inadvertently missed structured construct attention to emotional presence as crucial. Although Lipman (2003) carefully articulated the

importance of emotions in the original Community of Inquiry discussion, Anderson discloses that missing emotions in the framework may, in fact, have been as a result of an unexamined epistemology among the original CoI framework developers "I rather glibly replied that the CoI model was developed by three men from southern Alberta (Canada's cowboy country) and that REAL men in our limited world didn't do emotions!!" (Anderson, 2014, para 2).

Presence in a Community of Inquiry is multifaceted, involving conditions that emanate from both the facilitator and the members of the learning community (Cleveland-Innes & Campbell, 2012; Garrison, 2017; Garrison et al., 1999). In this regard, the recent assessments of the Community of Inquiry framework focusing on the articulation of emotional presence are duly warranted. "The CoI encourages one to think about what a successful conference would entail, but it does not adequately account for how to get there or make it happen" (Xin, 2012, p. 4).

The interplay of cognition and emotion, the calls for changes to the Community of Inquiry framework to represent a more current understanding of emotions and their importance in socially infused learning are all cogent and critical considerations. Therefore, I concur with the authors who have made attempts to expand the presence and, in particular, Peacock (2015) who states, "CoI seems at variance with current research reporting the strong student emotional response to working online, and particularly in collaborative, community-based groupings" (p. 2). The prominence of emotional presence as both a distinct presence and as a coexisting presence within the original three presences may benefit from continued refinement, including a deeper understanding of how active facilitation of emotional presence helps establish an emotional climate that is conducive to optimal learning (Rienties & Rivers, 2014; Williams, 2017). A deeper consideration of emotional presence as more than the outward expression of emotion, with attention to community-based affect diffusion and contagion, could be an

important addition. Garrison himself seems to be having second thoughts about the prominence of emotional considerations when he says, “it could be argued that emotion is the gravity of a Community of Inquiry in that it is pervasive, holds things together, plays an essential role in decision making, and is often the prime mover (volition)(Garrison, 2017, p. 41). Rolim and colleagues (2019) have raised an important issue regarding the affective in relation to the cognitive indicators and their importance along the continuum of cognition and deep learning in Communities of Inquiry. This finding harkens back to the importance placed on emotive thinking in Lipman’s initial articulation of community as pedagogically important. This finding supports the idea that there is much work to be done in terms of expanding emotional understanding within the cognitive presence construct of the CoI framework. Articulating emotions and emotional presence as pedagogical gravity could be realized by the addition of research that interrogates the causes, correlates and consequences of emotional indicators that manifest in Community of Inquiry behaviors and informs a more collective emotionally present pedagogy.

The Contribution This Study Will Make to the Literature

The idea of elaborating the much-researched Community of Inquiry framework to more formally include a fourth presence or expanded understanding of the complexity of the emotional constructs is not an alteration that is taken lightly. Yet, the substantial body of research covered in this literature review that implicates emotions as formidable at all stages of learning, combined with recent construct research, necessitates a more robust treatment within the CoI framework. “The question is whether it is helpful to see emotion as emanating from the social presence or as a distinct generalized environmental influence along with other exogenous factors such as student and contextual characteristics” (Garrison, 2017, p. 41). This study could help

inform this established void by taking an exploratory view of how students in a Community of Inquiry perceive, contribute to, label, and manage individual and collective emotions in order to facilitate their own learning and collaborative learning goals. The work will build on the effort of those who have already begun the details of construct building and defining emotional presence as a crucial consideration in CoI (Cleveland-Innes & Campbell, 2012; Majeski et al., 2018).

Chapter 3: Research Methods

Preamble

Pragmatism, as a term for a specific research paradigm, is connected in educational circles to the work of John Dewey (Morgan, 2014). “Teaching practice is of key importance in the system of philosophy of education. Educational methodology and, in particular, its scientific methods taken in integrated system and apprehended in the view of scientific principles of philosophical cognition, play a major role in practical activities of teachers” (Bim-Bad & Egorova, 2016, p. 3386). In the literature, pragmatism is often linked to mixed methods, but in reality “there is no deterministic link that forces the use of a paradigm with a set of methods” (Morgan, 2014, p. 1045). The philosophical roots of pragmatism rest in Denizen’s (2012) reflection that:

> It is a doctrine of meaning, a theory of truth. It rests on the argument that the meaning of an event cannot be given in advance of experience. The focus is on the consequences and meanings of an action or event in a social situation (p.81).

“Pragmatism’s secular respect for the historical and cultural bases of worldviews and normative systems, along with its rejection of ideals as ideas that are cognitively privileged contribute to its utility providing a practical view of how things work” (Margolis as cited in Korte & Mercuria, 2017, p.62). Pragmatism highlights the importance of communication and collective meaning-making (Shannon-Baker, 2016). This study is centered on the collective experience of learning and facilitating in a Community of Inquiry.

A pragmatist ontology encompasses the idea that reality is fluid and formed from the practical influence of ideas (Saunders, Lewis, & Thornhill, 2015). Pragmatism holds that all knowledge is a result of doing and the subsequent reflection on action (Korte & Mercurio, 2017).

This very subjective stance is very much aligned with the complexity of the research my problem statement intended to investigate.

Pragmatic research is often suitable when the investigator subscribes to a relational epistemology; this idea fits well with research that is investigating within a collaborative constructivist theoretical framework. “A relational epistemology attends to the interactive situatedness of knowing by highlighting four ideas: (1) knowing is done in connection to other people, (2) knowing involves the relationship we have with nonhuman aspects of the world, (3) knowing is many parted, and (4) knowing entails deep interconnectedness” (Huffman, 2018, p. 26). This highlights my own epistemic positioning as deeply embedded in holistic ways of knowing and respectful of community and collective voice. Korte and Mercurio (2017) contribute that in research that is centered in the pragmatic paradigm knowing and truth are only uncovered from the successful implementation of an idea.

Within the pragmatic paradigm, my own values are recognized to play an integral role at all stages of the research project. The key to articulating my ethical and axiological values comes from researcher reflexivity throughout the changing stages of the project. In fact, in this paradigm, the whole initiation of research is often born from the researcher’s own doubts, beliefs, and curiosities about a particular practice event or situation (Saunders et al., 2015). This remains a consistent truth in my own positioning within this research.

I come to the education field from a long practical experience in the “unlearning” field. Working in mental health and addictions for decades has equipped me with a broad understanding of the intricacies of emotion-cognition coupling. In this field, using emotions to help people uncover and unlearn distorted thinking patterns has made up the entirety of my practical workplace experience. While learning and unlearning may at first glance seem to be at

different ends of a continuum, it is my position that the wisdom that comes from attending to emotions is crucial in a variety of types of higher order thinking skills.

Pragmatic Methods

The pragmatic paradigm has been associated with a variety of methods, including case studies (Thompson, 2017) and narrative inquiry (Ruwhiu & Cone, 2010). Overall, the methods are connected to abductive research design (Saunders et al., 2015). That means that parts of the process can be inductive, and parts can be deductive. It is a flexible and flowing research tradition as it moves between theory and method, and connections to theory can be made both before and after data collection. This idea of research being flowing and iterative lends itself to the specific procedures that have been articulated in this design, procedures that are inherently interactive, iterative, flexible, and multistage.

In relation to the position and problem statement, I have previously outlined the pragmatic research paradigm offered a congruent framework and rationale in that it "always takes place within a naturally occurring, socially important setting" (Fishman, 1991, p. 403). Additionally, Shannon-Baker (2016) contends that the pragmatic approach is useful in situations where the research is meant to uncover practical solutions "pragmatic and relational frames encourage knowing that is heartfelt, humbling, stirring, and transformative "(Huffman, 2018, p.20).

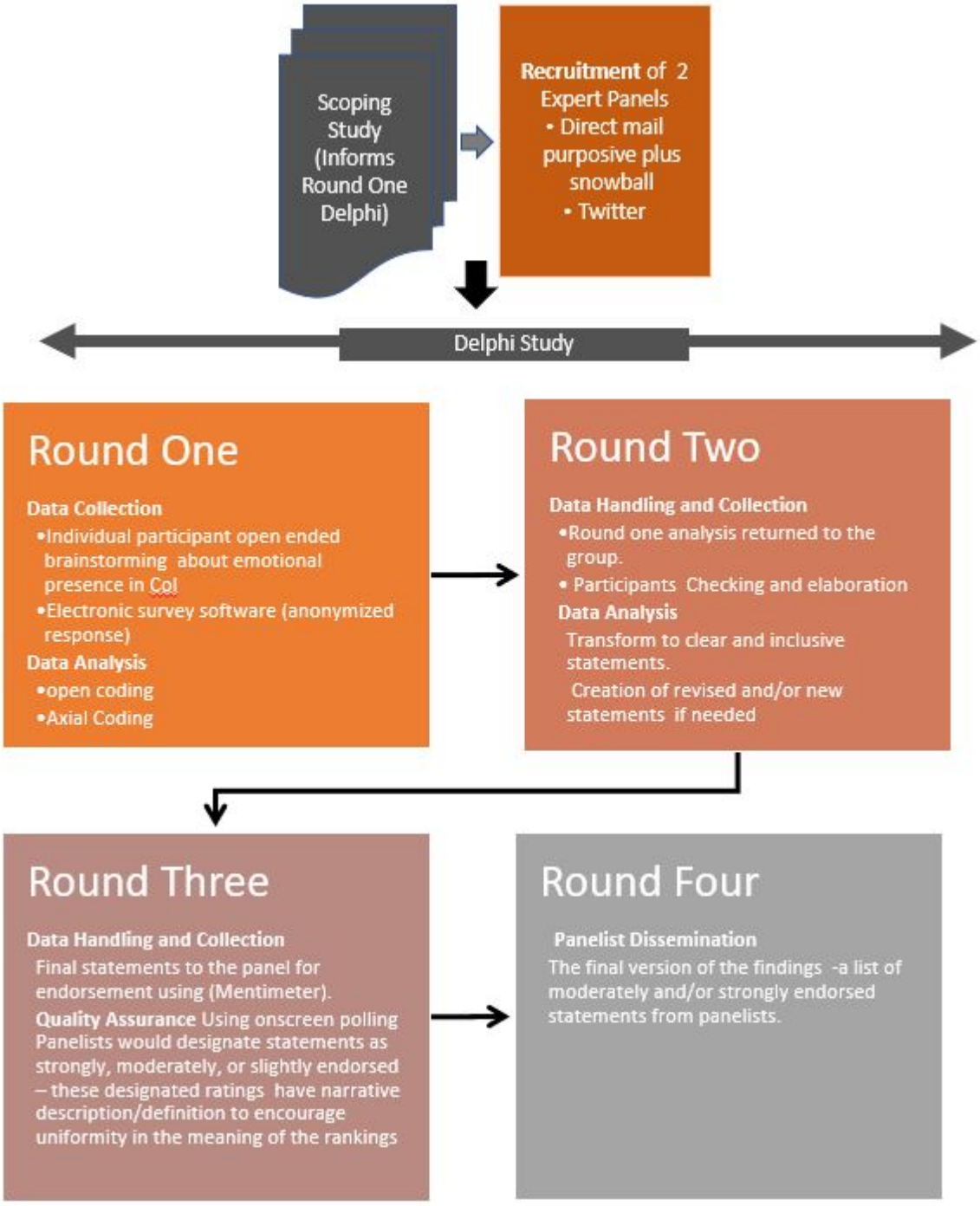
The methodology for this research was a two-phase approach; the first a scoping study (Arksey & O'Malley, 2005) of literature specific to emotions and their definitions, cognitive manifestations, and online community based learning significance. The second stage covered a dual subject Delphi study (Okoli & Pawlowski, 2004) that included gathering data about

emotions in a Community of Inquiry from both learners and facilitators who had experience with CoI.

The following section will cover the details of the design of the scoping study and the Delphi technique, data collection, rigor during and after data collection, data analysis, and ethical considerations. The specific instrumentation of the study is depicted in Figure 4. and then outlined in the subsequent text.

Figure 4

Specific Instrumentation



Emergent simultaneous mixed methods design based on (Rowell, Polush ,Riel & Bruewer, 2015; Sekayi & Kennedy, 2017)

Phase One: Initial Scoping Study

Description of Project

The focus of stage one was:

1. *What is known from the existing literature about emotions in online learning situations?*

Secondary analysis involved answering questions such as:

a. How are emotions defined?

b. What emotional taxonomies are used to delineate discrete emotions and emotional blends, and socially infused emotions?

Since the scoping study research question itself is all about what is already known in the literature, the literature analysis and subsequent discussion and critique informed the second stage of this data-led dissertation research.

Sources Searched

Empirical and informative studies were examined using database queries in EBSCO, PRO-QUEST, SAGE Publications, and Google Scholar. I will supplement these peer-reviewed published database queries with some technical reports about emotions in online learning.

Based on the central research question defined in the previous section, I had identified the principal keywords and search terms. In order to develop a comprehensive base, search terms included *emotional presence*, *Community of Inquiry framework*, *emotions in distance learning*. *emotional theories, and emotional taxonomies*. I concentrated on articles that were less than ten years old, peer-reviewed, and published in English.

Method for Recording the Literature

My method for recording the literature utilized what Bell and Waters (2014) label the problem-oriented approach, whereby my main research question is already known as I began the practical review. Arksey and O'Malley (2005) defined this methodological research process for reviewing relevant literature as a scoping study. This method is an appropriate form of analysis when only one literature coder is reviewing. Additionally, selecting a scoping study methodology is appropriate when a research question is concerned with conducting a "preliminary assessment of size and scope of available research literature… and [characterizing the] quantity and quality of literature, perhaps by study design and other key features" (Grant & Booth, 2009, p. 95). I followed a five-stage process while conducting the review in stage one of this proposed dissertation research.

Stage One: identifying the research question.

Stage Two: identifying relevant studies.

Stage Three: study selection.

Stage Four: charting the data.

Stage Five: collating, summarizing, and reporting the results.

Stage Six: Consultation (Arksey & O'Malley, 2005, p. 22).

Content analysis for this project used a combination of a priori coding and emergent coding practices, that became evident as I worked my way through the selected sources (Bell & Waters, 2014). My preliminary research analysis had already identified a dearth of research into emotions and their manifestations in the Community of Inquiry framework. Arksey and O'Malley (2005) suggested that stage four of the scoping methodology involves developing a

way to systematically capture and report the data from numerous literature sources. Charting and content analysis of the data was done using a largely qualitative narrative analysis method (Pawson, 2002). This method ensured a systematic way to read and review each paper to confirm they were scrutinized in relation to a common decision framework. This method permitted me to "select, organize and classify findings into a coherent pattern" (Bell & Waters, 2014, p. 14). The data matrix used as my a priori method for this review included the use of both the Zotero reference manager and excel spreadsheets. Coding consisted of author, theory, year, type of article, research methodology, how emotions were defined, and any taxonomies employed. This data extraction method permitted me to quickly assess relevance and create groupings of information that supported me to report key findings across several areas related to the research question and sub questions under inquiry. This method was also flexible enough that emergent coding was easily adapted when additional themes or important considerations were observed to materialize.

The preliminary literature review prepared for this thesis allowed me to start with an emerging understanding of the way emotions had previously been researched. The scoping study added additional depth to act as a basis for developing the line of questions in the second stage Delphi study.

Phase Two: Delphi

The Delphi research methodology is a methodology that was developed over 50 years ago as a consensus gathering method by the RAND corporation (Okoli & Pawlowski, 2004). The Delphi survey "is a group facilitation technique, which is an iterative multistage process, designed to transform opinion into group consensus" (Hasson et al., 2000, p. 1009). It is considered a useful method when the research question is concerned with developing a

framework (Okoli & Pawlowski, 2004). The Delphi method has been used often over the last five years in online and blended learning education research (Andrews, 2018; Banks, 2018; Bozkurt & Bozkaya, 2015; Dearden, 2019). There are no universal guidelines for using Delphi, and several versions exist in the literature (Hasson et al., 2000). All versions include careful recording and reporting of the stages and data gathering decisions in order to maintain methodological rigor.

Specific Procedures

Traditional Delphi methodology is designed in a series of data gathering steps intended to collate opinions from established experts in order to come to a consensus about the topic of investigation. It has been called iterative, multistage, and mixed-method because each stage can involve both qualitative and quantitative data analysis and subsequent review by the expert group (Hasson et al., 2000; Okoli & Pawlowski, 2004).

Research Population

The selection of panelists for the Delphi study entails a purposeful sampling technique, whereby recruitment is focused on those who have both interest and experience with the topic under investigation. This research recruited two distinct kinds of sources in Community of Inquiry learning. The research was complicated by the consideration that research about constructs within a Community of Inquiry is sometimes difficult because there is no prior assessment to ensure learners or educators who are participants are experiencing a true Community of Inquiry.

Garrison advises that "Most practical applications [of CoI] are imperfect designs, and we should expect some ambiguity" (Garrison, 2012, para. 5). For this reason, it was necessary to have Delphi participants articulate the elements of their online educational experience that align

with the CoI in an initial demographic and experiential data gathering tool. The data gathering proceeded when a sufficient panel of both learners and facilitators was established.

Instrumentation

In keeping with my own belief about the subjective nature of emotions and their manifestations, this Delphi Study integrated the use of two distinct experiential panels. Panel one was made up of authorities in the design, delivery, and facilitation of online Communities of Inquiry. Panel two was made up of learners who have experienced learning in a CoI and self-report a level of knowledge with the CoI model.

Recruitment

Recruitment of 13 learners and seven CoI practitioners took place using directed email, Twitter, and referral and nomination (snowball technique). In a recent systematic review, Twitter was found to be a suitable platform for building collegial groups and enhancing collaboration for teaching and learning (Malik et al., 2019). Using the platform as an expert sourcing and recruitment platform allowed for the recruitment of a more dynamic demographic of Community of Inquiry experts.

Data Collection

Data collection in a Delphi study happens over several rounds of surveys, each round moving closer towards consensus statements. In the last several years, the availability of software to aid in social science research has increased dramatically (Duka & Metzler, 2019). In this project, I used a suite of software tools to aid recruitment, informed consent, data gathering, and data coding. Data collection instruments are detailed in both figure 4. and the remaining narrative.

Round One

The first round is generally very open-ended in nature, designed to collect unbiased opinions from the Delphi panel (Okoli & Pawlowski, 2004). The initial survey was administered using research.net survey software. Each panel member received an internet link and was advised that they had a period of ten days to complete the first round. Only respondents who complete this round were considered to have entered the study and became eligible for round two.

Round Two

Data gathered in round one was synthesized and used to develop the second data gathering tool. At this stage, an anonymous link was created so that respondents could not be identified while participating in any subsequent Delphi round. Anonymity and the reduction of group member influence is an important design consideration in Delphi (Sekayi & Kennedy, 2017). Round two data was collated analyzed before moving to round three.

Round Three

In round three, the results of round two were analyzed, and a synchronous and asynchronous online-focused session was scheduled. Participants answered the last round of consensus-building using *Mentimeter*™ survey software so that panelists were able to see the results and consensus of this final round of questioning building on the screen. It was anticipated that conducting round three both synchronously and asynchronously would reduce at least one of the limitations often noted with Delphi, that of participant attrition related to the time a Delphi requires by offering a practical alternative opportunity for participation (Sekayi & Kennedy, 2017).

Round Four

In the final stage, the data gathered in round three was returned to the Delphi panelists. Closing comments or clarifications were considered in the final analysis.

Treatment of the Data

Data Analysis

Since Delphi is a flexible approach, data was analyzed in different ways at different stages. The stage one survey was analyzed using thematic analysis techniques, including open coding and axial coding (Arthur et al., 2012), in order to collate the emotional presence indicators and develop the stage two data-gathering instrument.

Data Storage

All data for this project was stored on a password-protected computer using only password-protected survey software. The names of Delphi panelists attached to round one was anonymized. Since the remaining rounds were conducted anonymously, there is no need to destroy any of the collected data. All third-party hosting software data as removed from the data base 14 days after collection.

Participant Authentication

Authentication is a process whereby themes drawn from the data are given back to participants in order that they may comment on the analysis prior to the final write-up of the findings (Seale, 2018). Delphi methodology is by design a participant consensus methodology. By using consecutive surveys, views were interpreted in a non-adversarial way, with frequent input on the current status of the collective opinion of the Delphi panelists (Hasson et al., 2000). Delphi methodology staged rounds not only made possible multiple levels of validation but added this form of validity by design. The flexibility of Delphi further lends itself to the

utilization of complementary qualitative research traditions. Studying emotions as a phenomenon in CoI suggests that Delphi participants were sharing their lived and living experience and, as such, the multiple staging of Delphi involved a specific and fluid design for both member checking and data authentication (Alase, 2017).

Limitations

While Delphi is a methodology that is fit for the purpose, in this case, it still carried several identified limitations. The Delphi methodology has been criticized for its use of the term "expert" to define the survey respondents (Okoli & Pawlowski, 2004). Inherent in the subject recruitment, I was looking to select those who already had an interest in the subject of emotions in online learning and the Community of Inquiry Framework in particular: this could have created conditions that increase the likelihood of both researcher and participant bias (Hasson et al., 2000).

Participant Attrition

The length and multiple data gathering rounds of a Delphi study could have created conditions in which attrition of participants could have occurred: in order to combat this, the initial participant invite was quite large. Only those who complete round one were invited to participate in subsequent rounds, and multiple data collection options were created to retain Delphi panelist input.

Ethics and Credibility

The impact of this research could have broad-scale implications. It is important to both increase validity and communicate the reliability of the research because it is possible that important Community of Inquiry framework decisions could be influenced by it. Within the pragmatic paradigm, issues of credibility and validity have been addresses by clear descriptions,

inference, and meaning making (Cohen et al.,2011). In keeping with the idea of research that has a practical application, the chosen methodology was malleable.

First and foremost, I was continually cognizant that by being trusted to undertake this research. I have an opportunity to participate in reimagining a very important framework in distance education. As Holloway and Freshwater (2007) caution, that means I exercised a duty to handle participant narrative with care at all stages.

I have discussed some overall ethical considerations in previous sections as part of the design framework decision-making process. In addition to choosing Delphi because it was ethically and theoretically congruent with Community of Inquiry, attention to informed consent, participant recognition, maintaining relationships, and addressing participant well-being were important considerations (Cohen et al.,2011).

As a student at Athabasca University, I maintained a duty to adhere to the submission procedures from Athabasca University guidelines for research involving human participants. I had completed the Government of Canada, *Panel on Research Ethics Course* (Government of Canada, 2018). Athabasca's ethics review process involved attention to ethical elements in three broad areas: respect for persons, concern for welfare, and justice (Athabasca University, 2018). A copy of the ethics approval for this project is included as Appendix 3.

Respect for Persons

Respect was carried out by attending to the areas of autonomy, voluntary consent, and capacity (Athabasca University, 2018). I have outlined the many ways I attended to and adhered to respectful practice. I made specific accounts about attending to respect for anonymity in Delphi rounds.

Concern for Welfare

This category means I was consistently attending to risk and benefits as well as clearly articulating the potential impacts of this research in all research instruments and subject recruitment documents. It involves being transparent about data storage, participant time, and the use of data results.

Justice

Simultaneously being concerned about fairness, equal treatment, inclusion, protection of vulnerable populations, and managing power differentials is a way towards meeting ethical conditions for justice (Athabasca University, 2018). The iterative nature of Delphi means that as the research progressed, I was obligated to remain reflexive about all these justice principles. Delphi as a design framework supported adherence to many of these principles, especially related to positions of power, because it does not in any way privilege me as the researcher. Some of the data analysis strategies I have outlined ensured that constant checking and rejecting of data with research participants is seamlessly blended into the entire research process.

Chapter Summary

Combining a scoping study with a Delphi survey study created a research project that could have become quite cumbersome. However, the topic of investigation is one that required a focused investigation of a very niche area of online distance learning. The multiple research reports detailed in the literature review that suggested the CoI framework should be expanded to include a stronger articulation of emotions, agency, self-regulation, and learning presence necessitated a more nuanced discussion between those who have invested time and energy in developing, designing, delivering, and learning within a Community of Inquiry framework. It was both timely and necessary to have a stronger and more focused discussion on the

operationalization and manifestation of these terms. Ultimately building consensus in a collaborative, constructive way is what Delphi seeks to do. As articulated in the significance section of this dissertation, it is time to come to a consensus about expanding or adapting the CoI to include a broader consideration and treatment about the crucial nature of emotions and their causes, correlates, and action consequences in CoI education.

Chapter 4: Findings

Chapter Introduction

This study was designed to investigate emotional presence in Community of Inquiry learning. The first phase included a scoping study to establish the depth and breadth of theories of emotions that might be most congruent with an investigation of emotions in the Community of Inquiry framework. The second stage used a Delphi study to explore CoI learning-related emotions and indicators of emotional presence from both a facilitator and learner perspective.

Procedure

Using a mixed method scoping study and Delphi procedure. The Delphi sampling process included 20 participants who had lived experience learning or facilitating in a Community of Inquiry online learning format. As outline in the methods section in chapter 3, the mixed-method approach used multi-method data collection, including two rounds of surveys and collaboration software for synchronous focus groups as a final round of consensus-building about emotional presence alignment in the CoI model. Procedures in this Delphi remained close to the four main features of classic Delphi, including adherence to the anonymity of participants, iteration of results, controlled feedback through returning findings between rounds to participants, and statistical aggregations (weighted averages) of a group response (G. Rowe & Wright, 1999). The process in every round involved using both open-ended questions designed to build from the collective intelligence about participant experience within Community of Inquiry and "narrow questions that focused on literature-derived content" (Skulmoski et al., 2007, p. 8) that were crafted from the data gathered in the pre-Delphi scoping exercise.

Reporting findings for a multistage study can take many forms, including chronological reporting by stages or delineated by established research questions. In this study, quantitative

results were generated as a complementary procedure to build consensus between rounds. Quantitative data was aggregated using Likert ranking or weighted averaging to inform the consensus-building between Delphi rounds. Qualitative data were inductively coded and thematically analyzed between Delphi rounds and presented to participants through refined data gathering mechanisms or consensus statements. The study data gathered between each round was returned to study participants for elaboration authentication (Skulmoski et al., 2007). The versatility of the Delphi technique leads to a variety of data reporting options. Therefore, this chapter is divided and presented according to the primary research questions. The first section presents the brief results of the scoping study about emotions in online learning. This portion of the research was explicitly used to provide a backdrop of emotion theory and emotions taxonomy to present to the Delphi panelists through the narrower question design in the Delphi rounds. The scoping study revealed a broad set of emotions spanning multiple taxonomies that may be important in Community of Inquiry (CoI) learning.

The first round of the Delphi led to the articulation of belief in emotional presence. One hundred percent of learners and facilitators indicated there is a specific emotional presence evident in CoI learning. Moving through the study, learners ranked specific indicators and then worked with the existing model to place indicators of emotional presence in conjunction with the existing CoI model. Further, that specific pedagogical practice related to setting the climate, supporting discourse, and regulating learning help to enact indicators of emotional presence as a shared and reciprocal construct; that is malleable over time and specific context. Participants raised and later collectively endorsed the need to be explicit about CoI methodology in the early stages of a learning endeavor in order to provide for a foundation to establish and regulate emotional presence.

The following six sections delineate the findings grouped by the research questions, beginning with the scoping study. Scoping reviews are used to map the concepts underpinning a research area (Arskey & O'Malley, 2005). The purpose of the scoping study was to function as a springboard for the subsequent Delphi process. Specifically, it was a catalyst to analytically review the literature on emotions in online learning to help inform the design of the second stage portion of this dissertation project Delphi study. The scoping research started with one primary and two sub-questions.

Research Question One: What is Known From the Existing Literature About Emotions in Online Learning Situations?

While the findings do not supply exhaustive details about what is known about the importance of emotions, there is reason to conclude that the study of emotions in online learning is becoming more important and that emotions have an important role in several aspects of online learning and by extrapolation the Community of Inquiry learning process. This includes being socially and cognitively important in a variety of ways.

In order to answer this question, I conducted a meta-database search using EBSCO-HOST complete through the Athabasca University online library system. The initial search used the keyword subject term "emotions" AND "online learning" OR "distance learning" OR "blended learning." This initial search strategy returned 380 results.

Title and Abstract Search

All 380 initial results were screened at the title and abstract level to determine suitability for inclusion. Inclusion criteria included articles in English published between 2010 and 2020 and specifically about emotions in online learning. Retained articles were those that related to human detection/inference or self-report of emotions in online or blended learning environments.

At this stage, applied exclusion criteria included articles about online readiness, building emotional competence or soft skills, and artificial intelligence (AI) as a means for determining emotions. Articles on these topics were subsequently excluded because of a lack of congruence or relevance with community-based learning philosophy. This exclusion decision included any articles about facial recognition or biofeedback detection (Pulse, EEG). Ultimately 243 initial articles were excluded, and 137 articles remained.

Charting The Data

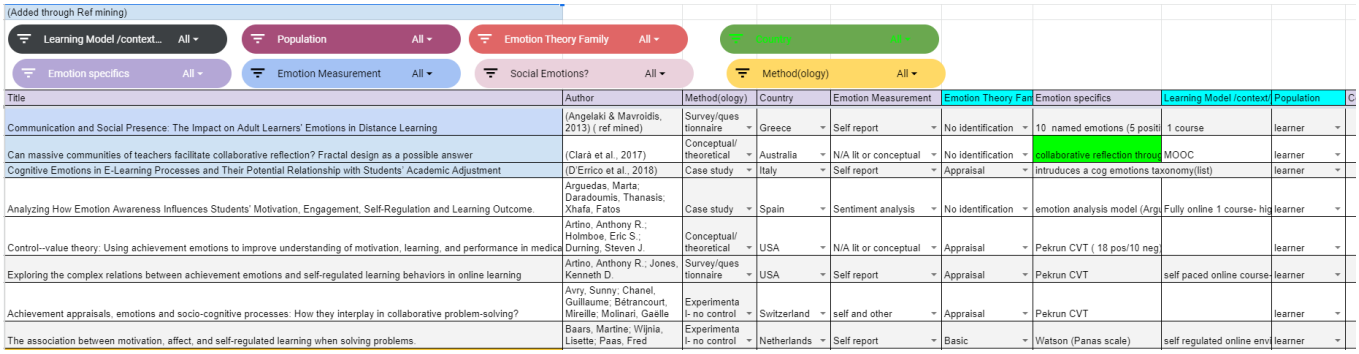
I created a spreadsheet of the 137 remaining articles in order to sort the articles by title and author. An additional 13 were removed as exact duplicates. One was removed as a later errata version was available (Mason et al., 2018). This refinement process left 123 remaining for the initial scoping analysis. Six were added through reference mining or citation chaining by reviewing relevant citations in the selected articles. A further 34 were excluded after deeper reading because they proved to be outside the inclusion criteria mentioned above since they were mainly about automated emotion detection, had no contextual inclusion of online learning, or the full-text version was not retrievable.

Citation Management

All remaining articles (95) were then sourced for full-text versions and stored as full-text portable document format (PDF) in Zotero reference management software. Here they were read and fully coded, initially using electronic highlighting and annotation, and then later using a formal coding spreadsheet delineated into columns as depicted in Figure 5.

Figure 5

Literature Coding Chart Sample



(Added through Ref mining)

Learning Model /context... All | Population All | Emotion Theory Family All | Country All

Emotion specifics All | Emotion Measurement All | Social Emotions? All | Method(ology) All

Title	Author	Method(ology)	Country	Emotion Measurement	Emotion Theory Fan	Emotion specifics	Learning Model /context/	Population	C
Communication and Social Presence: The Impact on Adult Learners' Emotions in Distance Learning	(Angelaki & Mavroidis, 2013) (ref mined)	Survey/questionnaire	Greece	Self report	No identification	10 named emotions (5 positi	1 course	learner	
Can massive communities of teachers facilitate collaborative reflection? Fractal design as a possible answer	(Clarà et al., 2017)	Conceptual/ theoretical	Australia	N/A lit or conceptual	No identification	collaborative reflection throu	MOOC	learner	
Cognitive Emotions in E-Learning Processes and Their Potential Relationship with Students' Academic Adjustment	(D'Errico et al., 2018)	Case study	Italy	Self report	Appraisal	intruduces a cog emotions taxonomy(list)		learner	
Analyzing How Emotion Awareness Influences Students' Motivation, Engagement, Self-Regulation and Learning Outcome.	Arguedas, Marta; Daradoumis, Thanasis; Xhafa, Fatos	Case study	Spain	Sentiment analysis	No identification	emotion analysis model (Argu	Fully online 1 course- hig	learner	
Control--value theory: Using achievement emotions to improve understanding of motivation, learning, and performance in medica	Artino, Anthony R.; Holmboe, Eric S.; Durning, Steven J.	Conceptual/ theoretical	USA	N/A lit or conceptual	Appraisal	Pekrun CVT (18 pos/10 neg)		learner	
Exploring the complex relations between achievement emotions and self-regulated learning behaviors in online learning	Artino, Anthony R.; Jones, Kenneth D.	Survey/questionnaire	USA	Self report	Appraisal	Pekrun CVT	self paced online course-	learner	
Achievement appraisals, emotions and socio-cognitive processes: How they interplay in collaborative problem-solving?	Avry, Sunny; Chanel, Guillaume; Bétrancourt, Mireille; Molinari, Gaëlle	Experimental- no control	Switzerland	self and other	Appraisal	Pekrun CVT		learner	
The association between motivation, affect, and self-regulated learning when solving problems.	Baars, Martine; Wijnia, Lisette; Paas, Fred	Experimental- no control	Netherlands	Self report	Basic	Watson (Panas scale)	self regulated online envi	learner	

Scoping Summary

This scoping study identified 95 publications about emotions in online learning that have been published between 2010 and 2020. The majority explore emotions at the individual student level, focusing on individual or situational emotional appraisal. Very few investigated the socially constructed nature of emotions in learning, and only two were explicitly about emotions in Community of Inquiry learning (Cleveland-Innes & Campbell, 2012; Sarsar & Kisla, 2016).

Emotions Research in Online Learning Characteristics

Article content was coded into several categories in order to provide a common framework for review. This framework includes methodology, year, country, definitions, emotional terms, and findings as planned in the proposal for this project. Though some of the coding was not directly related to the initial scoping study questions, the emergence and delineation of additional categories helped frame my understanding of the state and breadth of emotions research in online learning.

Reported Study Methodology

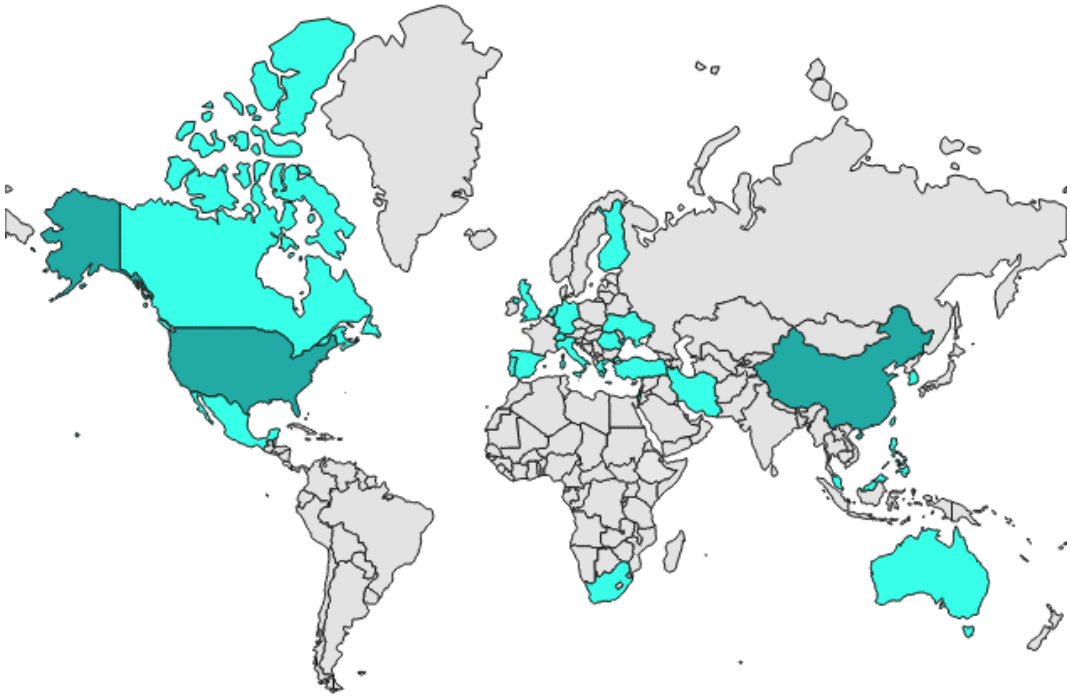
Studies and contributions come from a wide range of methodological frameworks. There was no preference given to primary research for the purpose of scoping because literature reviews that aided in defining the complexity of the topic were deemed helpful to the process.

Country

Countries are reported by the site of study. However, it is quite possible that in the case of distance universities, the study population could have been accessing the educational context from other parts of the world. The majority of the studies were conducted in the USA (20), China (7), Australia (5), and Canada (5), and the United Kingdom (5). Figure 4.2 depicts the geographic regions of existing studies shaded in blue.

Figure 6

Map of the Countries Reflected in the Scoping Review



Research Question Two: What Emotional Taxonomies are Used to Delineate Discrete Emotions, Emotional Blends and Socially Infused Emotions in Online Learning?

In reference to RQ2, ultimately the finding was that in online learning, researchers are employing several unique stratifications, classifications, or grouping conventions, including academic emotions and non-academic emotions (Cheng, 2014), epistemic emotions (Rienties et al., 2019), aesthetic emotions (Riaz & Mushtaq, 2016), social emotions, basic emotions, discrete emotions, secondary emotions (Parlangeli et al., 2012) and cognitive emotions (D'Errico et al., 2018).

The most often cited or used taxonomy emotions in the 95 studies is tied to Pekrun and control value theory. Fourteen of the studies were reporting either alignment or instrument utilization that is based on this theory. The achievement emotions questionnaire (AEQ) or derivatives were used in 14 studies, sometimes as a single instrument, other times combined with

other measures, including personality or motivation inventories. Other measurement forms include student and instructor self-report, sentiment analysis, discourse analysis, or textual analysis. Several studies link emotional research to motivational instruments like the motivated strategies for learning questionnaire (MSLQ) or ARCS model, or various tools tied to emotional intelligence models.

Research Question Three: How are Emotions Defined?

To explore and answer RQ 3, the 95 articles were reviewed for specific emotional terms that had been specifically studied or articulated in the article findings. Ultimately the major finding was that there is no consistent emotional definition being used in online learning studies and that there are multiple overlaps in emotional taxonomy stratification. Emotions relevant to CoI learning and, in particular, social and cognitive presence may be covered in taxonomies that point to both social and epistemic categorization. The idea that emotions research is complicated by varied emotional lexicon, definitions, and theoretical basis is evident across the articles reviewed. The overlap between the emotional lexicon and the varied taxonomies of emotions was clear. In order to fulfill the intent of the scoping study as a pre- Delphi exercise, designed to inform CoI research, the labels used in the studies were parsed for attention to social and epistemic taxonomic alignment. In total, 12 social emotions and 11 epistemic emotional labels were derived.

Social Emotions

Social and relational emotions are those that are considered to occur most often in relation to communication and involvement with others (Parkinson, 2021; Parkinson & Manstead, 2015). They have been called self-transcendent because they are thought to increase attunity to others (Stellar et al., 2017). While it is very difficult to dichotomize what would

constitute an individual emotion and a social emotion, the learning link or definition supplied in some studies aids in an understanding of why the label was used in online learning studies. Collectively the reviewed articles listed several socially informed emotional terms. Table 3 depicts the socially informed emotions studied, described, or referenced throughout the 95 studies aligned with the expressed learning significance. The listed emotional labels were found in the literature review, methods, and findings sections of the included studies.

Table 3

List of Social Emotions Referenced in the Scoping Literature

Social Emotion	Studies	Learning Link
Admiration	(Hewson, 2018)	Emotions like admiration rarely studied
Gratitude/thankfulness	(Artino & Jones, 2012; Avry, 2020; D'Errico et al., 2018; Hewson, 2018; Pérez-2012; Root et al., 2019; Rowe et al., 2015)	Gratitude "appears to increase the perception of socio-cognitive processes through the reinforcement of group mastery" (Avry, 2020, p.1)
Jealousy	(Parlangeli et al., 2012)	Considered a secondary emotion, probable to be socially and culturally determined.
Empathy	(Arguedas et al., 2016; ;Cheng, 2014; Jokikokko & Uitto, 2017; Majeski et al., 2017; Meyer & Jones, 2012; Qin et al., 2014; Root et al., 2019; Rowe et al., 2015; Tian et al., 2014; Tomas & Ritchie, 2012; Valizadeh, 2016; Williams et al., 2013; Youde, 2016)	Emotions guided by care and concern for others, such as empathy and sympathy (i.e., moral emotions), are important in the exploration and resolution of socio-scientific issues. Enables students to adopt multiple perspectives. Related to safety for exploration, perspective-taking
Attunement	(Meyer & Jones, 2012)	Listening with complete receptivity; attuning to a person, linked to attention to others.
Belonging	(Clarà et al., 2017; Peacock, 2015)	An identity, or membership based on the interpersonal relations among members, linked to both social presence and engagement (Clara).
Embarrassment	(Cleveland-Innes & Campbell, 2012; D'Mello et al., 2010; Jones,2010; Parlangeli et al., 2012)	"Among the social emotions, embarrassment can be explained as a sense of discomfort arising essentially within social contexts, where an individual worries about self-image" (Parlangeli et al., 2012, p, 44).
Hope	(Artino et al., 2012;Artino & Jones, 2012; Avry, 2020;	Considered a positive activation (Avry, 2020) or achievement enhancing (Hamm et

Social Emotion	Studies	Learning Link
	Carolissen et al., 2011; Chen et al., 2014; Hamm et al., 2017; Järvelä et al., 2013; Jokikokko & Uitto, 2017; Maymon et al., 2018; Peacock, 2015; Ramirez-Arellano et al., 2019; Stephan et al.,2019)	al.). At a facilitator level connected to a pedagogy of hope (Carolissen et al., 2011). Linked to metacognition (Ramirez-Arellano et al., 2019).
Hope (lessness)	(Stephan et al., 2019; Tempelaar et al., 2012)	
Collaborative reflection		
Altruism	(Brooks & Young, 2015; Chen et al., 2014; Cheng, 2014)	Connected to why facilitate a MOOC (Brooks &Young) Altruism offered a possible and critical avenue for raising emotional support in learning (Cheng, 2014).
Trust	(Chen et al., 2014)	Community trust impacts intention to share and sharing behavior.

Epistemic or Cognitive Emotions

Epistemic or cognitive emotions are delineated in the literature as those specific emotions that often create cognitive incongruence, awaken epistemic curiosity, and open the pathway to cognitive progress (Järvelä et al., 2013; Vogl et al., 2019). This set of emotions has been linked with specific dialogic and social learning tasks, including seeking clarification, requesting elaboration, questioning, helpful argumentation, and linking (Andriessen et al., 2011). The scoping study uncovered 11 specific taxonomic labels for these emotional or affective states that are depicted in Table 4 adjacent to the articulated CoI relevant collaborative learning link.

Table 4

Table of Epistemic Emotions as Labeled in Scoped Literature

Epistemic Emotions	Studies	CoI Learning link
Confusion	(Cocoradă, 2016; D'Errico et al., 2018; Manwaring et al., 2017; Regan et al., 2012; Root et al., 2019; Syed et al., 2019)	Linked with oscillation with other deep learning emotions, including disorienting nature preceding learning and shift in worldview. Sometimes considered a double-edged emotion
Curiosity	Cleveland-Innes & Campbell, 2012; D'Errico et al., 2018; Järvelä et al., 2013; Parlangeli et al., 2012; Peacock, 2015; Poitras et al., 2019; Regan et al., 2012; A. D. Rowe et al., 2015; Tyng et al., 2017)	Individual curiosity as a social curiosity catalyst and an element of coming together in the community. It is related to motivation and cognitive investment. Prepares the learner for remembering. It exists in a sequential relationship with frustration
Concentration	(Järvelä et al., 2013) (Arguedas et al., 2016) (D'Errico et al., 2018) (Katernyak et al., 2018) (Manwaring et al., 2017) (D'Mello et al., 2010) (Tomas & Ritchie, 2012) (Rowe et al., 2015)	An emotional state of flow, connected to and an antecedent of both motivation and engagement.
Boredom	Avry, 2020; Buhr et al., 2019; Cocoradă, 2016; Daniels & Stupnisky, 2012; D'Errico et al., 2018; Hamm et al., 2017 Järvelä et al., 2013; Poitras et al., 2019; Stephan et al., 2019	Often categorized as a negative emotion yet has been linked to positive learning conditions like reflection. In some models (Pekrun) considered a deactivating emotion. Has utility in metacognition (Corcada). In one study considered a maladaptive achievement emotion (Hamm)
Enthusiasm	Angelaki & Mavroidis, 2013; Cleveland-Innes & Campbell, 2012; D'Errico et al., 2018; D'Mello et al., 2010; Fernández-Toro & Hurd, 2014; Jeong et al., 2019; Katernyak et al., 2018; Marchand & Gutierrez, 2012; Meyer & Jones, 2012; Qin et al., 2014; Rowe et al., 2015 Tian et al., 2014; Tomas & Ritchie, 2012; Williams et al., 2013)	Has been considered an undervalued construct in distance learning, considered a consequence of optimal learning emotions. Connected to moral or aesthetic value for content. Has been connected to motivation to engage in peer-to-peer social presence (Angelaki), linked to a state of flow. Found to decay from lack of affective interaction (Tian). Instructor enthusiasm connected to learner engagement (Williams) Described as a contagion emotion (Rowe)
Surprise	Cleveland-Innes & Campbell, 2012; D'Errico et al., 2018	Considered a brief, intense emotion sometimes directly related to a

Epistemic Emotions	Studies	CoI Learning link
	D'Mello et al., 2010; Järvelä et al., 2013; Kotsakis et al., 2014; Kock & Chatelain-Jardón, 2016; Meyer & Jones, 2012; Parlangeli et al., 2012; Tian et al., 2014;Williams, 2017)	"triggering event" (Jarvela), directly related to cognitive processing and learning (Parlangeli et al., 2012). Can be both positive and negative but is often loaded on positive scales in many studies. In at least one study, intentional negative surprise increased learning (Kock & Chatelain-Jardón, 2016). Connected to deep learning and metacognition (Williams, 2017).
Attention	D'Errico et al., 2018; D'Mello et al., 2010; Katernyak et al., 2018; Xu et al., 2013)	Attention is often considered a result of underlying emotions like curiosity and interest. Behavioral attention has been linked to social attunement and social intelligence (Meyer & Jones, 2012) and linked to arousal and interest. In one study (Xu) linked to intentional emotional management (regulation).
Disappointment	Angelaki & Mavroidis, 2013; Artino et al., 2012; Avry, 2020; Butz et al., 2016 Cleveland-Innes & Campbell, 2012; D'Errico et al., 2018; Delahunty et al., 2014; Fernández-Toro & Hurd, 2014; Syed et al., 2019; Tian et al., 2014)	A dejection-related emotion related to constructs of an ideal self. Related to moral or aesthetic values. Can result from a mismatch of expectations.
Annoyance	(Artino & Jones, 2012; D'Errico et al., 2018; D'Mello et al., 2010; Peacock, 2015; Järvelä et al., 2013)	On a continuum of intensity from irritation to frustration. Directed at both content and people.
Frustration	Avry, 2020; Fernández-Toro & Hurd, 2014; Peacock, 2015)	Linked with ambiguous instructions, can be directed at others or self
Interest	(Cleveland-Innes & Campbell, 2012; Huang et al., 2019; Qin, 2014)	Individual interest may lead to activity in the social plane. Diminished by negative emotions (Qin). Increased in immersive environments and leads to collaboration (Huang)

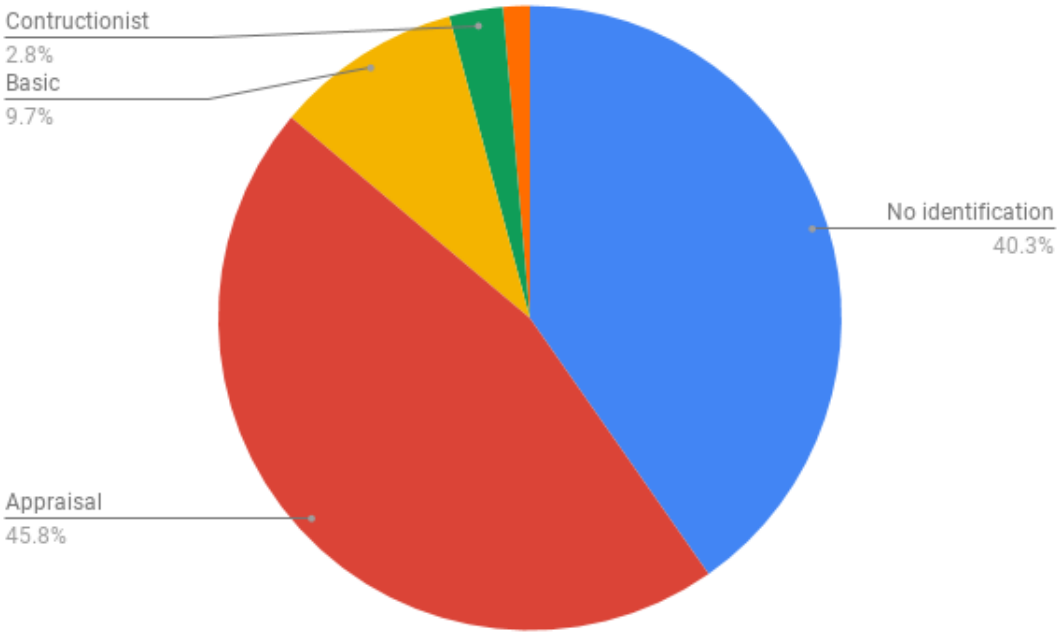
Theoretical Base and Emotional Definitions

The literature review supporting this study identified that emotions theories generally fall into three main categories: basic emotions theories, constructionist emotions theories, and appraisal type theories (Scherer, 2015).

Despite the long list of taxonomic labels and emotions lexicon that was derived through the scoping study, many studies about emotions in online learning are non-specific about the foundational emotional definition or theory they are using to inform their study design. Studies were subject to content analysis coded for an identified approach. Many studies report using an emotional theory that falls in an individual appraisal category, like control value theory (45.8%). Basic theories were identified in 9.7%, and no identification could be garnered in 40.3% of the studies. Constructionist theories were articulated in only 2.8%. Figure 7 represents the theoretical stratifications of the reviewed studies.

Figure 7

Emotional Theories Used in Online Learning Studies

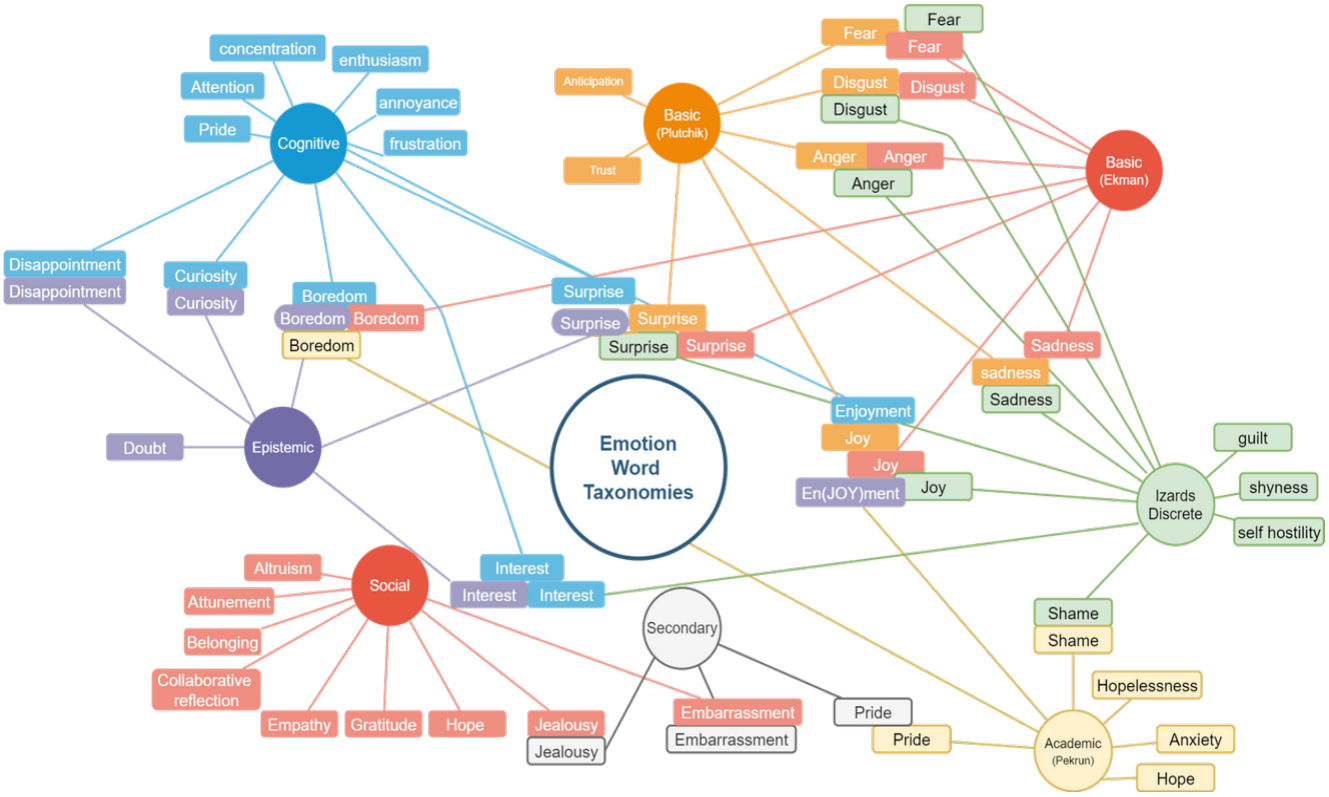


Some studies offer findings related to individual or emotional coregulation, discussing individual or collective emotional regulation or shifting emotions through the learning journey stages (Bakhtiar et al., 2018; D'Errico et al., 2018; Marchand & Gutierrez, 2012).

In at least one case, researchers built a specific eLearning taxonomy (Tian et al., 2014). The complexity and overlaps of the taxonomic families and labels discussed in the 95 articles are depicted in figure 8; the overlapping taxonomical labels are evident; as an example, the label *surprise* is observed in five different taxonomies.

Figure 8

Taxonomic Labels and Groupings Found Across in Scoping Study



Populations and Sample

Eighty-eight of the studies used the learners as the sample. Two studies did a combined analysis and considered both learner and facilitator (Rowe et al., 2015; Sarsar, 2017). Five considered the emotional aspects of being an online facilitator (Badia et al., 2019; Carolissen et al., 2011; Jokikokko & Uitto, 2017; Regan et al., 2012; Youde, 2016).

Scoping Study Finding Summary

Across the variety of studies that centre on emotions in online learning, various emotional theories are applied within various online learning designs. Studies align with various emotional theories but don't always articulate them. Appraisal theories are used most often, and constructionist emotional theories have been used the least. The emotional label lexicon is varied and stratified across many major emotional groupings, and considerable overlap is noted between conceptual or taxonomic categories.

CoI is an online learning framework that takes a holistic view of how learning happens; it does not privilege the cognitive view of learning over the socially constructed view of learning and equally recognizes the collective teaching as an important contributor. Based on this, the purposeful integration of emotional or affective presence in CoI may benefit from the same degree of balanced consideration. With all this in mind, this scoping of the literature focused on being congruent with the theoretical framework of the CoI and shaped a line of questioning in the subsequent Delphi study that considered how emotions might impact/influence/underpin all three established CoI presences.

Delphi Data Analysis

In reference to the pragmatic paradigm that bordered this research process, Johnson and Onwuegbuzie's suggestion is employed. While enacting the imbedded logic of this type of inquiry, "the use of induction (or discovery of patterns), deduction (testing of theories and hypotheses), and abduction (uncovering and relying on the best of a set of explanations for understanding" (2004, p.17). Each of these analysis types was used in iterative and emerging ways as the study unfolded (Poth, 2018), resulting in a decision to present the findings, not as a chronological Delphi staged process but rather as integrated with alignment with the established

research questions. Tables mapping the research questions and data gathering instrument matrix are embedded with the specific data source questions that were considered in the staged analysis.

Stage Two Delphi Procedure

The Delphi process in this study spanned five months. It involved 11 data collection instruments divided between two subject groups, including six survey instruments, four collective virtual meetings, and an open and recorded chat box during the virtual meetings.

Participants in the study's Delphi portion were either experienced Community of Inquiry facilitators (n=7) and Community of Inquiry learners (n=13). All but one participant contributed to three rounds of concurrent qualitative and quantitative data collection. The study's main purpose was to elicit perspectives about experience and articulation of emotional presence; therefore, this study can be considered a qualitative dominant mixed methods Delphi study.

Collecting data to specifically answer the research questions happened in iterative ways throughout all six data collection instruments yet followed a pattern of connecting to the CoI theoretical framework in the following broad ways:

Emotions that are theoretically aligned with social presence were explored through quantitative Likert-type rating and qualitative questions. These questions presented labels for socially, relationally, or collectively significant emotions as identified in the scoping study. Requests to document unidirectional and bidirectional experiences and reflections on the learning significance focused the questions. Cognitive presence was considered in quantitative Likert-type rating and qualitative questions. These questions presented epistemic labels for emotions garnered from the scoping study and asked about the frequency of experience in terms of never, sometimes, and often and qualitatively reflections on the learning significance. Data about emotions more closely aligned with teaching presence were derived from largely

qualitative questions that asked about the enactment of and responsibility for emotional presence from both a learner and facilitator perspective.

Data was gathered through qualitative open-ended survey items and closed, or rating-type items derived from either the scoping literature or collated data from preceding surveys. The data gathering involved two distinct sample populations, CoI learners and CoI facilitators. In the following sections, the Delphi stage process and integrated findings are reported.

Learner Delphi Study

The first prong of this two-subject Delphi was conducted with learners who had experienced online teaching within the Community of Inquiry framework.

Recruitment of Learners

The recruitment of learners for the Delphi study involved using three primary recruitment mechanisms. Posters and recruitment emails were circulated at Athabasca University, Mount Royal University, and a social media recruitment post (Twitter). In total, 22 learners who had experience with Community of Inquiry learning volunteered or asked more questions about the study's eligibility. After sending study details and consent forms, 13 learners indicated they met the conditions and level of willingness to become participants in the study. All 13 signed consent forms before the first round of data collection.

Sample Demographics Learner

Learners who met the criteria and availability for all three rounds of the Delphi study ranged in age from groupings of (25-34) through over 65, as outlined in Table 5.

Table 5

Delphi Panelist Age at Time of Initial Collection

Answer Choices	Responses	
18-24	0.00%	0
25-34	7.69%	1
35-44	30.77%	4
45-54	23.08%	3
55-64	30.77%	4
65+	7.69%	1

The participants were male (23%) and female (77%). They came primarily from North America, with one participant from South America. Learners were mainly English first language speakers; two (15.3 %) endorsed an alternate first language. Learners were asked to describe their experience with learning in a Community of Inquiry. Most of the volunteers conveyed other forms of additional expertise, including time spent explicitly studying the CoI Framework. Several learners indicated having adopted the CoI framework into their course design or facilitation practice (69%), and some stated they were using CoI in their research programs (31%).

Facilitator Delphi Study

The second prong of this two-subject Delphi was conducted with facilitators who have experienced online teaching within the Community of Inquiry framework.

Recruitment of Facilitators

The recruitment process for this prong used both direct mail invitation and recruitment via Twitter posting. A total of ten facilitators indicated interest and involvement in the study; however, in the end, seven completed the round one survey and became eligible for participation in all three Delphi rounds.

Survey one opened with a confirmation of understanding of time commitment and electronic consent to participate in the study. When electronic informed consent was received, the remainder of the survey one question became available. The survey opened with demographic questions and experiential qualifiers.

Facilitator Demographics

Facilitators who met the criteria and availability for all three rounds of the Delphi study ranged in age from groupings of (23-44) through over 65, as outlined in Table 6.

Table 6

Facilitator Delphi Panel Age

Answer Choices	Responses	
18-24	0.00%	0
25-34	0.00%	0
35-44	28.57%	2
45-54	28.57%	2
55-64	0.00%	0
65+	42.86	3

They were male (57%) and female (43%). Sekayi and Kennedy (2017) have indicated that a value inherent in Delphi methodology is the ability "to gather data from the best participants (panel of experts) without regard for location" (p. 2755). I was able to sustain this advantage; study participants came from North America, the United Kingdom, Scandinavia, and Europe. Facilitators were mainly English first language speakers, with two (29%) endorsing an alternate first language. Facilitators were asked to describe their experience with the Community of Inquiry, including any time spent being a learner in a CoI environment. Facilitators indicated a wealth of experiential expertise, including participating in original research on the CoI survey, being a CoI learner, using its facilitation, maintaining a research agenda, and writing various CoI

publications. In total, respondents indicated a combined 76 years of experience with the Community of Inquiry Framework. Respondents indicated that they use CoI across a variety of course designs, including K-12, College, University MOOCs, and Professional Development learning, as depicted in Table 7.

Table 7

Facilitation Milieu of Participants

Answer Choices	Responses	
K-12	14.29%	1
College	28.57%	2
University	85.71%	6
MOOC	14.29%	1
Professional Development	57.14%	4
Other	0.00%	0

Familiarity With Emotional Presence

The first non-demographic question was designed to garner familiarity with the idea of emotional presence related to the existing CoI Framework.

Have you Heard of Emotional Presence as it Relates to CoI?

All panelists (100%) indicated they were familiar with the idea and went on to qualify their understanding and interest in emotional presence. Although data was gathered in two separate Delphi procedures, the following sections report the integrated findings.

Research Question Four: What Community of Inquiry Framework Indicators Support the Development and Maintenance of Academically Important Emotions?

Data to inform the findings for question four was dispersed across all rounds of this Delphi. Beginning in round one, both learners and facilitators were presented with charts of social-emotional taxonomy labels and asked to endorse their experience with the specific labels along a graduated continuum of experience. Learners and facilitators in this Delphi endorsed the

presence of a total of 69 varied emotion labels across two different stratifications (social, epistemic).

Social Emotions

In round one, the focus on social emotions in questions 12 and 13 in the learner survey and questions 15 and 16 in the facilitator survey resulted in the partial or full endorsement of all of the emotions as extrapolated from the research articles found in the scoping study. Learners were presented with a chart of 15 social emotional labels. Figures 9 and 10 depict the ranked order by the weighted average of the socially focused emotions felt by CoI learners and witnessed by CoI Facilitators during CoI Learning.

Figure 9

Social-Emotions as Experienced by Delphi Participant Learners

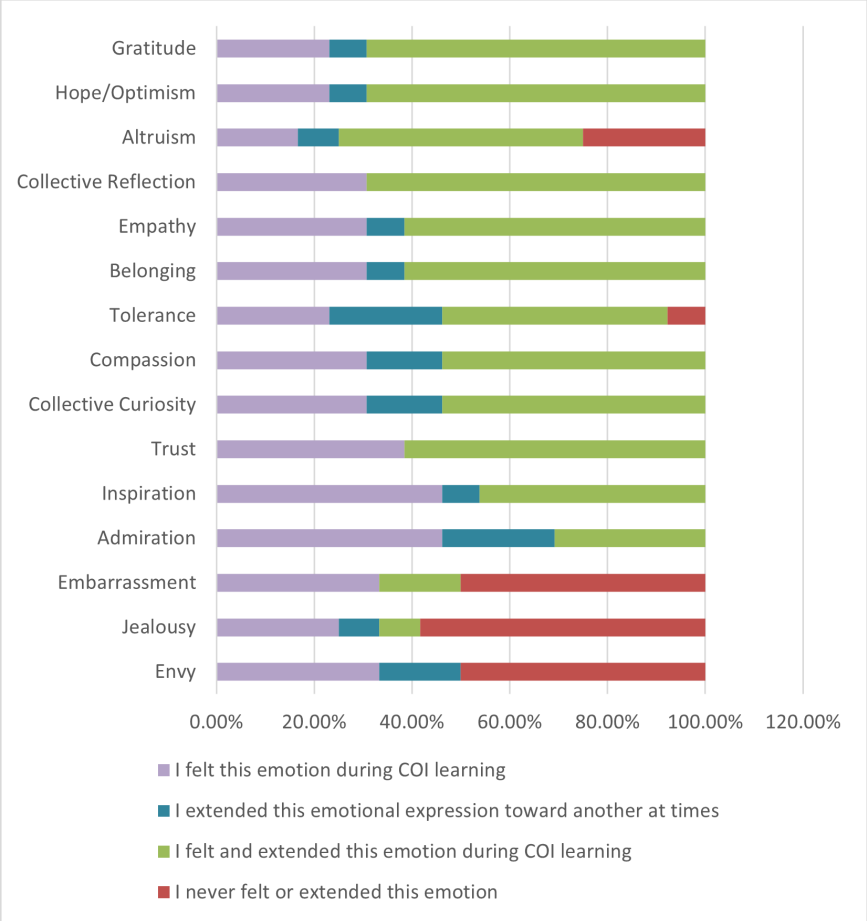
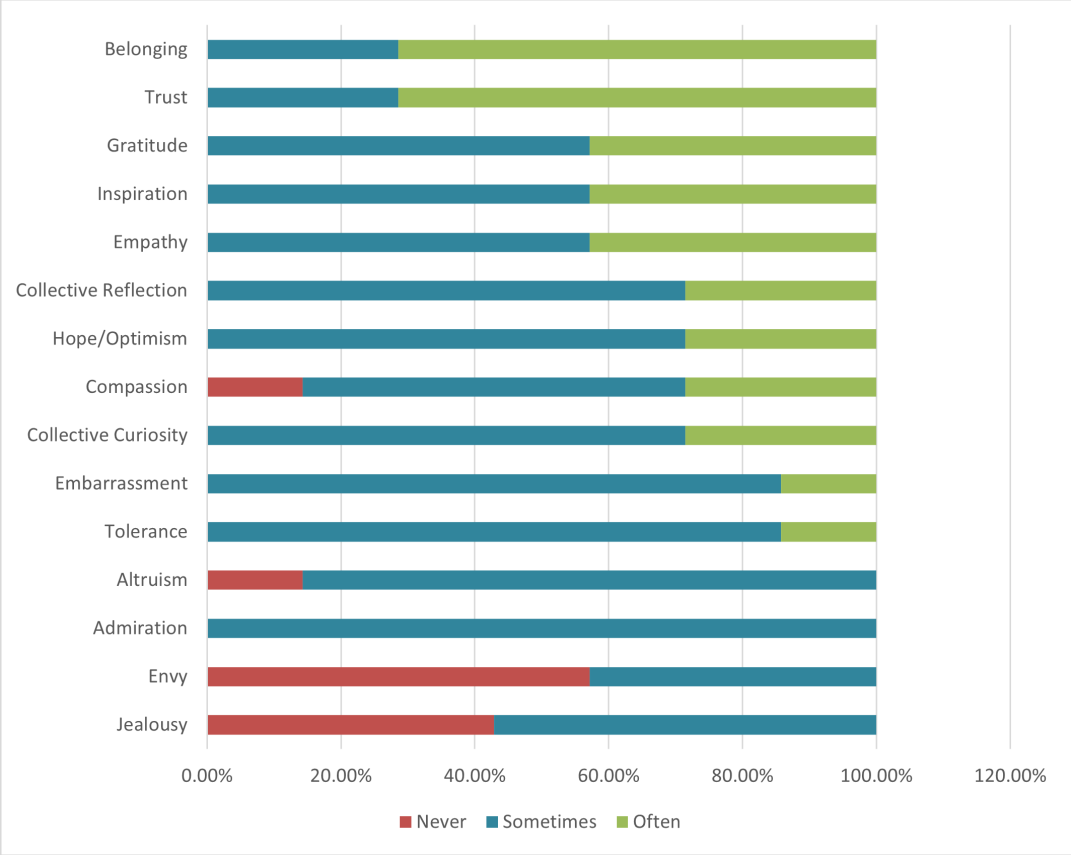


Figure 10

Social Emotions as Witnessed by Delphi Participant Facilitators



In addition to the presented chart, learners and facilitators added to an open-ended question about any additional emotions that they felt fit within the social emotions category. A further 25 emotion labels were added, including curiosity, intolerance, anger (2), sadness, concern (2), acceptance of diversity, caring, frustration, wonder, relief (2) joy (2), enjoyment, disappointment (2), impatience, feeling discriminated, thankfulness, annoyance (2), hostility, humor, and WTF. The learner who indicated WTF suggested it represented a feeling that had no standard label. One learner described intolerance as the feeling towards *"fellow learners who go on and on in discussion forums or conversations without consideration of others"* Another learner described the idea and learning significance of trust as *"Being able to express my*

emotions in a safe and trusting space with my peers has saved me because peers helped me identify obstacles interfering with my learning."

Cognitive -Epistemic Emotions

In the second round of the Delphi, learners were presented with a list of cognitively or epistemically focused emotions that were derived from the scoping study. Figures 11 and 12 depict the endorsed epistemic emotions ranked by most often felt (learners) and witnessed (facilitators). In addition to the presented labels, learners and facilitators added an additional 17 labels including, exhaustion, delight, confidence, pride, openness to novelty, happiness, satisfaction, contempt, anxiousness, protected, shame, flow, recognition, reticence, humour, embarrassment and what could be considered a transformative emotional experience labeled by the learner as "embarrassment and the subsequent drive to self-correct."

Figure 11

Epistemic Emotions as Endorsed by CoI Learners

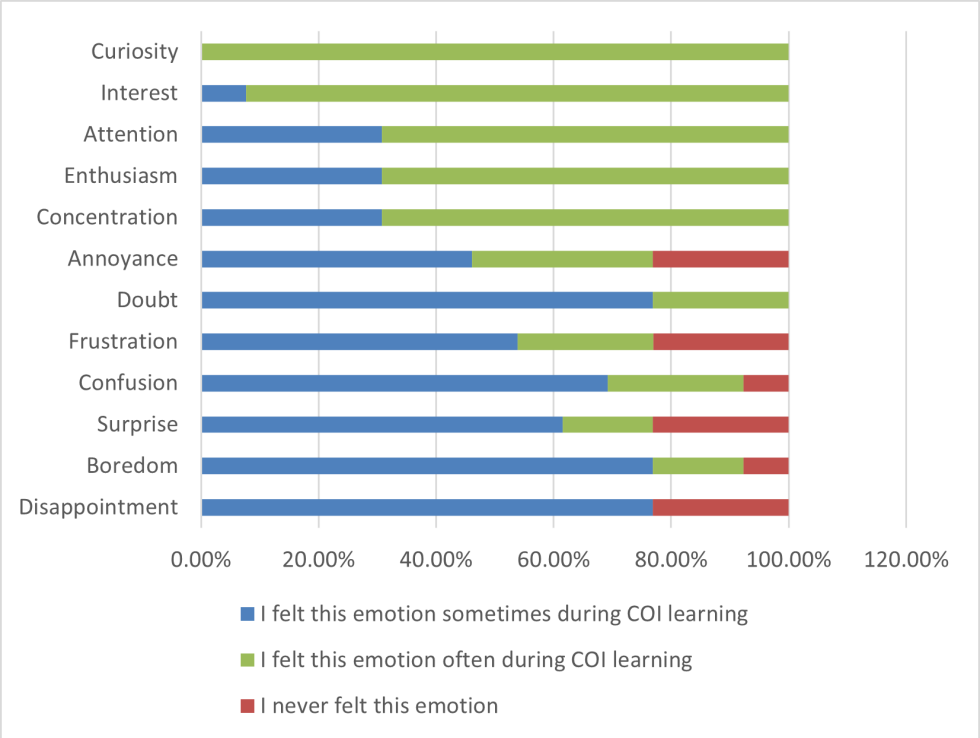
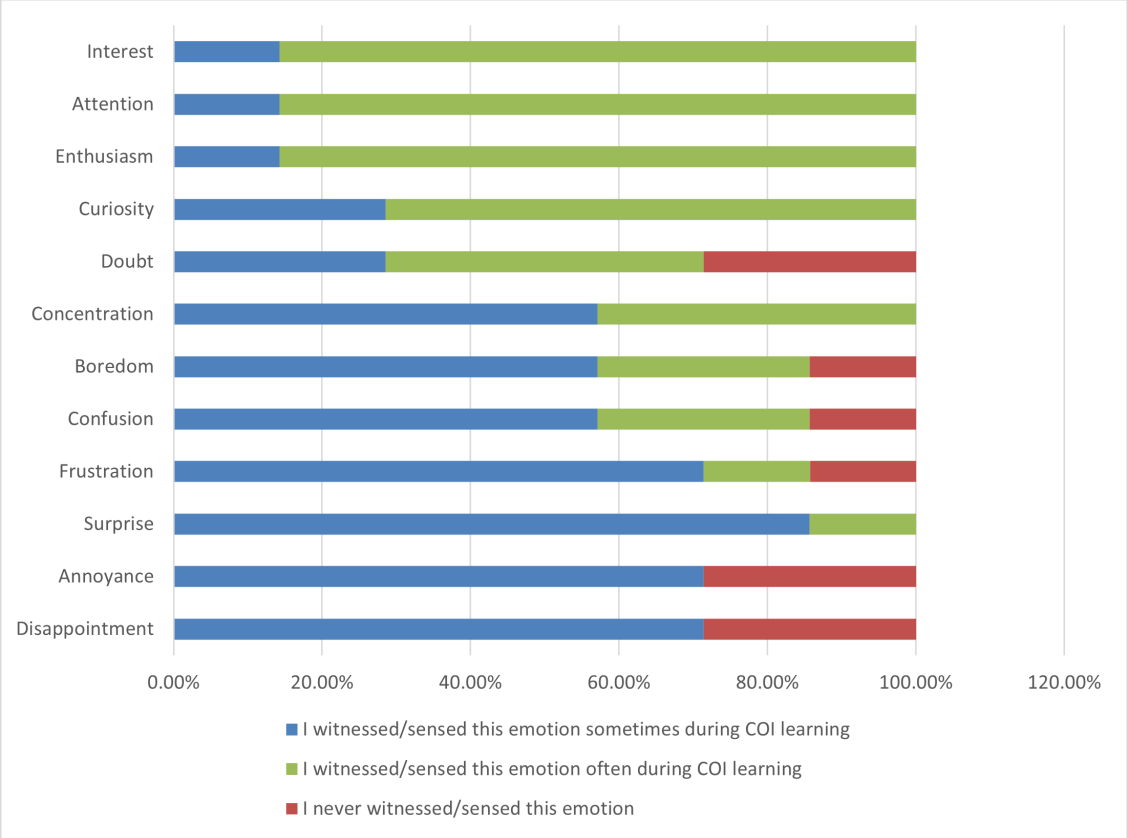


Figure 12

Epistemic Emotions as Endorsed by CoI Facilitators



Delphi participants from both groups supported the existence of emotions across several taxonomical stratifications derived and outlined in Figure 3 from the scoping study. Added to this, the participants identified an additional set of emotions that they deemed relevant to CoI learning through open-ended contribution. The combined analysis of the quantitative (Likert) endorsement and the qualitative clarifications in round one led to the first integrated finding and consensus statement that all emotions can have academic significance when it comes to CoI and collaborative constructivist foundations**.** After two rounds of exploration about taxonomic labels and the presentation of two separate charts of emotions established from the literature and descriptive elaboration in round three, both Delphi panels were presented with the following consensus statement. *The variety of emotions implicated in learning is wide and spans various*

taxonomies, including academic, social, and cognitively (epistemically) focused. Table 8 outlines the combined endorsement results.

Table 8

Consensus Statement Endorsement

	Learners	Facilitators	Qualifying and Supporting Comments
Agree	12	7	*"Safety to share and address emotions is linked to relationship building; I do feel emotional intelligence and development of it can be shared across a CoI and benefit learners and teachers."*
Disagree	0	0	
Percentage Agreement	100%	100%	*"EP "trumps" IQ or cognitive presence. As one who experiences by "doing" (experiential learner), the mixture of vulnerability and confidence is in a constant interplay on the learning curve. EP will influence this process."*
			"Emotions play a big role in learning and are sometimes left unexplored, which can impact the learning environment and learning process. Awareness of EP can help teachers and learners collaborate respectfully and collegially."

One of the primary intentions of a Delphi study is to come to a consensus about the elements under investigation (Izaryk & Skarakis-Doyle, 2017); in this regard, 100 percent of the learners and facilitators agreed with the statement as presented. Considering the research question regarding which Community of Inquiry Framework indicators support the development and maintenance of academically important emotions? It becomes clear that the framework indicators that would support emotions may be located in alignment with indicators of both cognitive and social presence and that purposeful enactment and extension of some of the emotions aligns with much of the philosophy of shared teaching presence. Additional findings related to this are articulated later aligned with research question five.

Research Question Five: What Pedagogical Elements of CoI Help Regulate, Build or Sustain Academically Important Emotions?

As was outlined in the findings related to RQ 4, it is challenging to stratify academically important emotions, especially because CoI employs a much broader scope than unidirectional transmission-based learning. Participants in this study endorsed the presence of 69 unique social and cognitively aligned emotions throughout their CoI learning journey. In one participant's words, this diffusion, breadth, and depth of emotion emerge:

I can say that for me, and an important way of positioning or motivating emotion presence is to position it in the model. So, if there is emotion… Of course, there are emotions in the community of inquiry; there's no doubt about that. It's all about how we conceptualize it and how does it then fit together into the original model (FS2:264).

Data to support findings on research question five were integrated from questions included in all three rounds of the Delphi study table. Table 9 depicts the question integration. Learner rounds are abbreviated as L1, L2, L3, and Facilitator rounds as F1, F2, F3. The stratification of data collection includes two main themes, pedagogical and community elements that were offered as facilitator influenced responsibility, and pedagogical and community elements that were offered as learner influenced responsibility.

Table 9

Table of Integrated Instrument Questions

Round	LR1	LR2	LR3	FR1	FR2	FR3
Question	Q7,8,9,11	Q1,3,4,5	All consensus statements, indicator endorsement	Q13,14	Q2,4,5, 10,12,13	All consensus statements, indicator endorsement

Pedagogical Elements Facilitator

Through three study rounds, participants iteratively moved through adding statements about what they believed was the learner and facilitator role in the enactment and sustenance of emotional presence (round one), ranking the importance (round two), and then coding placement or possible alignment in the existing Community of Inquiry model (round three). Table 10 outlines the cumulative data from all three learner rounds.

Between rounds three and four, coding data about the Community of Inquiry focused on comparing elements of emotional presence as added to existing writing about CoI foundations, coding transcripts, and survey instruments. My emerging understanding resulted in a combination of inductive and deductive coding that helped formulate the data gathering tool for the final synchronous session. Saldana (2016) advises that one way to balance the risk with solo coding is to take the data back to the participants themselves. Therefore, round three focused on taking the preliminary findings from rounds one and two back to the participants in the form of collective coding and consensus statements. In that session, there was an emphasis on presenting back the facilitator pedagogical elements in ranked order and offering the statements along a four-choice continuum.

Table 10

Integrated Findings of Facilitator Elements of Emotional Presence

Delphi Round One	Delphi Round Two						Delphi Round 3
	Not Imp	Slight Imp	Mod Imp	Imp	Very Imp	WAVG	Learner Coded Model alignment
Setting tone and climate	0.00	0.00	7.69	15.38	76.92	3.69	Setting Climate
Build positive, affirming and constructive feedback	0.00	0.00	7.69	15.38	76.92	3.69	Supporting Discourse & Settling Climate
Recognizing that learners are whole beings who may have things unrelated to the course that affect them and their ability to learn	0.00	7.69	0.00	15.38	76.92	3.62	Setting Climate
Creating a climate of cultural safety and inclusion	0	0	15.38	7.69	76.92	3.62	Supporting Discourse & Settling Climate
Recognize learners' emotional reactions	0.00	0.00	0.00	46.15	53.85	3.54	Supporting Discourse
Role model appropriate emotional response	0.00	0.00	15.38	15.38	69.23	3.54	Setting Climate
Igniting motivation by choosing question prompts	0.00	0.00	7.69	53.85	38.46	3.31	Regulating Learning
Demonstrate compassion	7.69	0.00	15.38	7.69	69.23	3.31	Something Else
Manage group behavior	0.00	0.00	30.77	23.08	46.15	3.15	Setting Climate
Encourage, stimulate and trigger reflection in actions, words, experiences and thought processes	0.00	15.38	0.00	46.15	38.46	3.08	Setting Climate
Creating "safe space" to discuss contextual (family/work) factors that affect learning	7.69	15.38	0.00	23.08	53.85	3	Setting Climate
Acknowledging that learning is emotional	0.00	7.69	23.08	30.77	38.46	3	SC & RL & SD
Connect emotions to ethical/sustainability behaviors	0.00	7.69	23.08	38.46	30.77	2.92	Something Else
Manage inappropriate expressions of emotions	0.00	15.38	15.38	30.77	38.46	2.92	Setting Climate
Bring their own emotional landscape to the learning environment - be vulnerable	0.00	15.38	15.38	30.77	38.46	2.92	Setting Climate
Establishing personal connections	0.00	0.00	46.15	15.38	38.46	2.92	Setting Climate
Foster camaraderie	0.00	7.69	30.7	30.77	30.77	2.85	Setting Climate
Providing personalized examples	7.69	0.00	30.77	38.46	23.08	2.69	Supporting Discourse
Encourage emotional reactions to content	7.69	15.38	30.77	23.08	23.08	2.38	Supporting Discourse

The learners and facilitators were experienced with CoI, and they were intimately familiar with the descriptions that were already included in the three principal presences of CoI.

The minimally explored CoI overlaps and a wild card "something else" category was presented as a choice structure. Indicators could be placed in multiple categories; therefore, the ranking numbers can reflect more than one category per participant.

Additionally, any participant elaborations were captured in either voice transcript or text chat-based qualitative reflections. In this exercise, the learners worked with the pedagogical elements they added and the facilitators with their own added facilitation indicators. Tables 11 and 12 depict the collectively coded statements from both the learner and facilitator groups. Both subject groups indicated that it was difficult to code the emotional presence indicator to one area of the CoI Framework because oftentimes, the behavior overlaps across multiple areas. The results indicate that, according to both learners and facilitators, indicators of emotional presence straddle across the existing elements already articulated in the CoI framework. The number one ranked emotional presence indicator was setting tone and climate, and although the majority coded that to the already establishes climate setting overlap, there were still overlaps with supporting discourse and regulating learning.

A significant number of comments and rankings indicate that emotional presence is a shared responsibility. It is mutable to different learning contexts and the level of CoI experience of the learner and the facilitator. In one facilitator's words, "*in fact, it [emotional presence] is a shared responsibility, but it is the instructor who will create a space that learners can show their emotional presence and then more responsibility can be given to learners* (FS2:10). This notion of shared responsibility was further elucidated in other iterations of data collection synthesis; learner responsibility is related to the pedagogical elements of emotional presence.

Table 11

Learner Collectively Coded Emotional Presence Indicators

Learner Added Indicator	Supporting Discourse	Setting Climate and Conditions for Learning	Regulating Learning	Something Else
Setting tone and climate	4	10	1	0
Encourage emotional reactions to content	7	3	1	0
Recognizing that learners are whole beings who may have things unrelated to the course that affect them and their ability to learn.	2	8	4	1
Creating a climate of cultural safety and inclusion	6	6	0	0
Role modeling appropriate emotional response	4	9	3	0
Recognize learners' emotional reactions	9	3	1	1
Build positive affirming, and constructive feedback	4	4	3	1
Acknowledging that learning is emotional	3	6	6	7
Igniting motivation by choosing question prompts	3	4	5	0
Connect emotions to ethical and sustainability behaviors	1	3	2	6
Manage group behavior	3	6	2	1
Managing inappropriate expressions of emotions	2	7	2	1
Bring their own emotional landscape to the learning environment, be vulnerable	3	6	3	2
Establishing personal connections	2	6	2	2
creating a safe space to discuss contextual (family/work) factors that affect learning	1	10	1	0
Encourage, stimulate and trigger reflection in actions. Words, experiences, and thought processes	4	5	2	1
Demonstrate compassion	5	6	0	2
Foster Camaraderie	3	6	0	3
Provide personalized examples	9	2	0	2

Table 12

Facilitator Collectively Coded Emotional Presence Indicators

Indicator	Supporting Discourse	Setting Climate and Conditions for Learning	Regulating Learning	Something Else
*Address Students by name	5	5	4	3
Proactive engagement with learners	7	6	5	1
Facilitate and scaffold learning	5	6	5	1
Be attentive to the needs of the community	6	6	4	2
Actively seek to ensure a positive emotional presence within the COI.	5	7	3	4
Empathy to discern emotive issues	7	5	2	4
Willingness to share own relevant experience	7	6	3	1
*Develop initial course activities (e.g., ice breakers) to encourage the development of trust	4	6	2	4
Encourage students to share experiences and beliefs in online discussion	6	3	2	1
*Encourage and support vicarious interaction	5	5	4	4
*Explicitly introduce students to the importance of student-to-student interaction	5	6	3	1
*Have dedicated discussion for course introductions to help build a sense of community	6	7	1	3
Use emoticons	5	6	1	1
*Make many human connections early in the course to ensure all students feel comfortable communicating with you and each other	6	7	2	4
Develop a sixth sense when speaking with the learner to determine such things as attitude, forms of learning issues not disclosed, confidence.	5	5	4	3
Encourage learners as teacher's (through presentations)	4	6	6	2
Demonstrate empathy	7	7	5	4
Demonstrate level of regard	6	6	2	2
Demonstrate genuineness	6	7	5	3
Acknowledge emotion and let it serve as a guide to prompt the practical inquiry.	6	5	5	2
Demonstrate unconditionality	5	4	2	1
Unconditional positive regard for emotional issues as perceived/declared by learners	6	6	4	4
*Model and encourage the use of verbal immediacy behaviors in interactions with students	4	4	3	4
*Share personal stories and professional experiences	7	7	3	3

Indicator	Supporting Discourse	Setting Climate and Conditions for Learning	Regulating Learning	Something Else
*Conduct one-on-few coaching and mentoring	3	5	5	3
Demonstrate Flexibility with assignments	0	7	5	1
Use a coaching method[1]	4	6	5	1

Pedagogical Elements of Learner Responsibility

Starting with a view to the collaborative, constructive nature of CoI and the grounded assumption of shared responsibility for all three existing presences, round one asked an open-ended question about learner responsibility for emotional presence; round two presented those collectively generated responsibilities back to the groups for importance ranking on a scale of not important to very important. Table 13 shows the integrated results of the facilitator added indicators of learner emotional presence combined with the survey two weighted average rankings.

Table 14 presents the combined and rank order results of the learner indicators that were added by participants in round one and ranked in round two. None of the added indicators were rated as not important. Similar to the facilitator rounds, active participation and demonstration of empathy and compassion figured strongly in terms of behaviorally enacting emotional presence.

[1] Items marked with * were added by participant with citation from other sources. Citations were removed during the Delphi process. Sources include: (Dunlap & Lowenthal, 2018; Fiock, 2019; Peacock & Cowan, 2016; Richardson et al, 2009; Rovai, 2000; Lowenthal & Dunlap, 2018)

Table 13

Facilitator Indicators of Learner Emotional Presence with Round Two Rankings

	Not Imp	Slightly Imp	Mod Imp	Imp	Very Imp	WAVG
Regular participation	0.00%	0.00%	0.00%	33.33%	66.67%	4.67
Contribute to the community by being active within it	0.00%	0.00%	0.00%0	42.86%	57.14%	4.57
Practice social presence indicators -- affective, cohesive, and interactive	0.00%	0.00%	14.29%	28.57%	57.14%	4.43
Avoid free-standing soliloquies (in discussion boards)	0.00%	0.00%	33.33%	0.00%	66.67%	4.33
Pro-active engagement	0.00%	0.00%	0.00%	71.43%	28.57%	4.29
Add posts/responses that lead to real, deep discussion	0.00%	0.00%	14.29%	42.86%	42.86%	4.29
Trust their peers	0.00%	0.00%	16.67%	50.00%	33.33%	4.17
Demonstrate empathy	0.00%	0.00%	14.29%	57.14%	28.57%	4.14
Unconditional positive regard for emotive issues for other learners	0.00%	0.00%	28.57%	42.86%	28.57%	4
Be willing to share personal experiences and stories	0.00%	0.00%	14.29%	85.71%	0.00%	3.86
Setting the interpersonal connection between community members.	0.00%	14.29%	14.29%	71.43%	0.00%	3.57

Table 14

Indicators of Learner Emotional Presence with Round Two Delphi Rankings

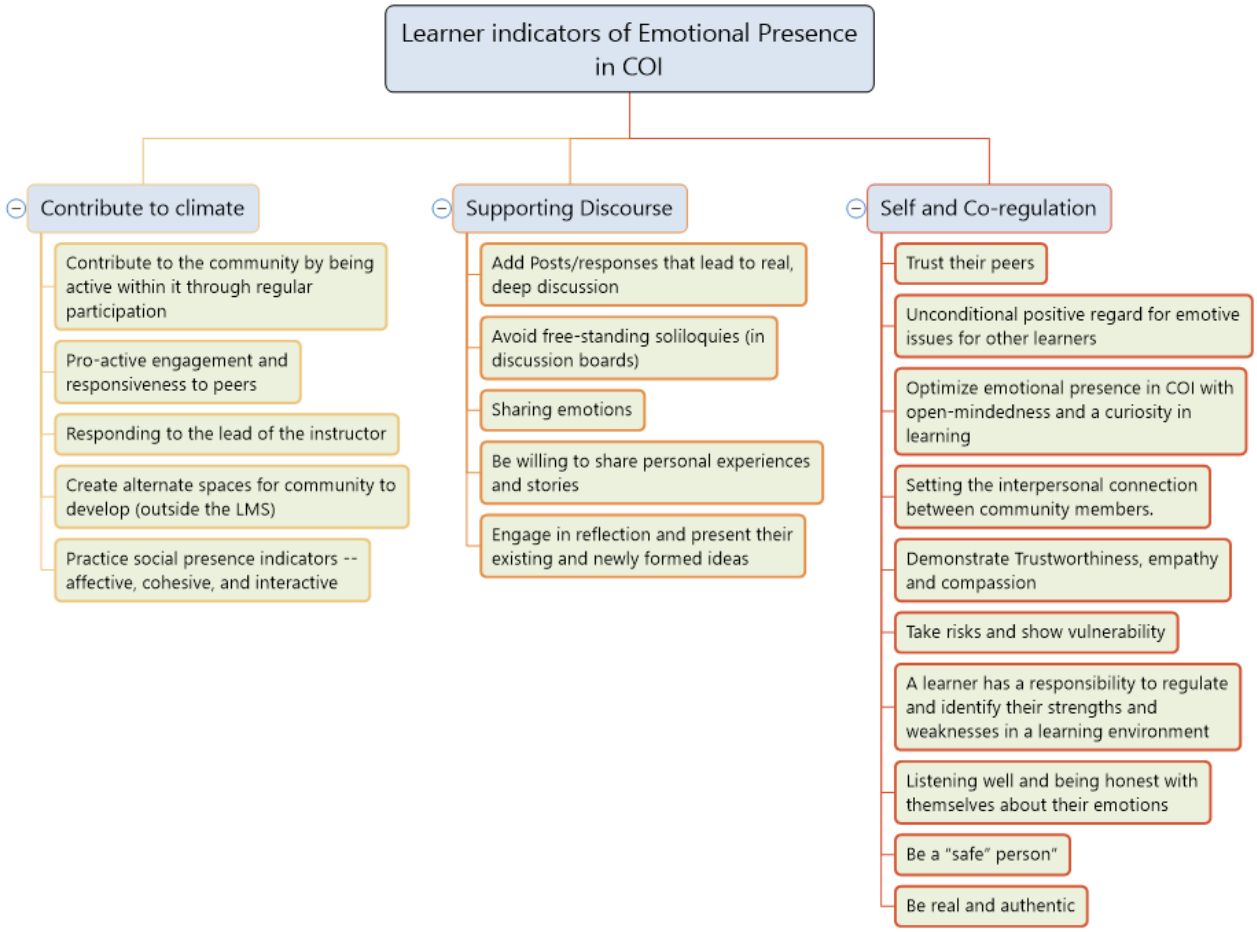
	Not Imp	Slightly Imp	Mod Imp	Imp	Very Imp	WAVG
Listening well and being honest with themselves about their emotions	0.00%	0.00%	0.00%	53.85%	46.15%	4.46
Be real and authentic	0.00%	0.00%	7.69%	38.46%	53.85%	4.46
Actively participate	0.00%	0.00%	0.00%	53.85%	46.15%	4.46
Optimize emotional presence in COI with open-mindedness and a curiosity in learning	0.00%	0.00%	15.38 %	38.46%	46.15%	4.31
Demonstrate trustworthiness and compassion	0.00%	0.00%	23.08 %	23.08%	53.85%	4.31
Be responsive to peers	0.00%	0.00%	7.69%	61.54%	30.77%	4.23
Engage in reflection and present their existing and newly formed ideas	0.00%	7.69%	7.69%	46.15%	38.46%	4.15
A learner has a responsibility to regulate and identify their	0.00%	0.00%	38.46 %	30.77%	30.77%	3.92

	Not Imp	Slightly Imp	Mod Imp	Imp	Very Imp	WAVG
strengths and weaknesses in a learning environment						
Recognize it is impossible to interact with anything/anyone without emotion	0.00%	7.69%	15.38%	61.54%	15.38%	3.85
Be a “safe” person	0.00%	7.69%	46.15%	7.69%	38.46%	3.77
Responding to the lead of the instructor	0.00%	0.00%	38.46%	53.85%	7.69%	3.69
Create alternate spaces for community to develop (outside the LMS)	0.00%	15.38%	30.77%	38.46%	15.38%	3.54
Take risks and show vulnerability	0.00%	15.38%	30.77%	53.85%	0.00%	3.38
Sharing emotions	0.00%	23.08%	53.85%	23.08%	0.00%	3

In order to analyze the combined learner emotional presence indicators added by learners and facilitators, each of the indicators was transferred to mind mapping software and then grouped thematically according to the existing CoI model. Figure 4.9 presents the collapsing and grouping of data into three specific thematic areas: contributing to climate, self, and co-regulation, and supporting discourse.

Figure 13

Integrated Learner Emotional Presence Indicators



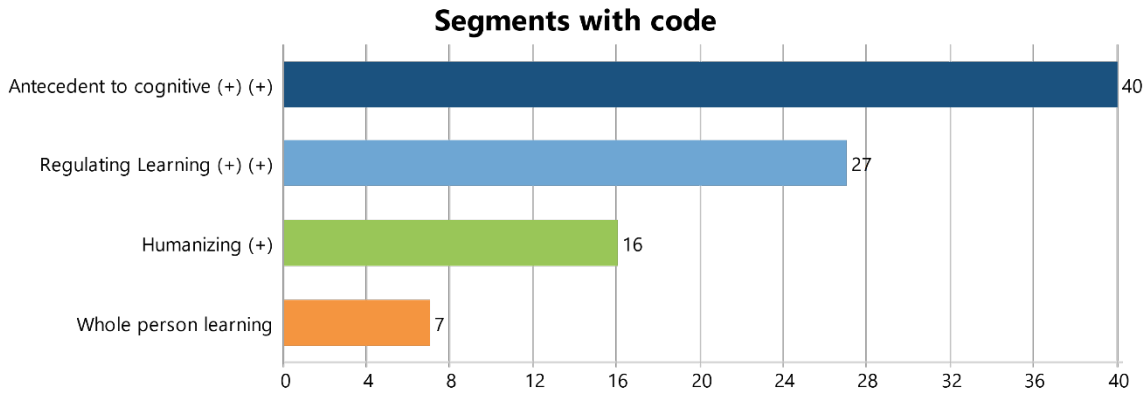
Research Question Six What is the Learning Significance of Emotions in CoI?

As was outlined previously, many emotions can have academic significance across all three major presences. Throughout all rounds of the Delphi process, learners and facilitators added insight into the learning significance of emotions. Through both the endorsement of social and cognitive emotions and the pedagogical elements added through learner and facilitator behavioral and attitudinal indicators, a picture of the multi-branched importance of emotional presence emerged. In addition, all three rounds of data analysis included open coding for learning significance. In total, 90 segments were coded to learning significance and then

thematically analyzed. Three major areas were identified, emotions as antecedents to cognitive presence, emotions as learning regulators, emotions as contributing to whole person, or humanized learning. Figure 14 depicts the coding frequencies from this integrated survey coding.

Figure 14

Coded Segment Frequency



Humanizing Learning

Learners and facilitators used the word humanizing or *whole person* in relation to emotional presence multiple times throughout their reflections through all three rounds. In total, 24 qualitative segments were coded to either humanizing or whole person code. In one case, a learner indicated it was the ability to humanize learning that made CoI so attractive to them as a framework that made the community roles more balanced "*in order to make courses more "humane." It was a way to humanize professors, to help them "see" themselves as part of a community (so that students wouldn't perceive them as being absent), but also as a means for students to develop a community" (LS2:3-4).* Another learner used stronger phraseology and suggested that recognition of emotions in the CoI framework would help to "*correct a rather*

patriarchal Venn that at first appeared to erase participants' emotional lifeworlds from the educational experience. (LS1: 24).

The idea of humanizing or whole-person learning was also suggested by a facilitator in relation to the early stages of learning "*I'm wanting to know more about the learner, so I can help them. It's not to make a judgment of any sort; it's okay now I see where you're coming from. Okay, or, you know, we need to work on why you feel this way about the [content], to create confidence"* (FS3:197).

The synthesis of comments about emotional presence and humanizing learning were returned to the participants between each round and in the final round to be considered as a consensus statement that was worded **"**adding explicit recognition of emotional presence to CoI would make it more humane." There was strong endorsement resulting in a weighted average consensus rating of (3.7) on a five-point scale.

Emotions as an Antecedent to Cognitive Presence

Across all six data-gathering instruments, learners and facilitators offered reflections and consensus ratings about the strong connection between emotions and cognitive presence. In the facilitator Delphi, it resulted in the presentation of a round three consensus statement.

"Creating a learning climate requires us to meet affective/emotional needs of the learners, and this is then followed by cognitive." The statement as presented received a four out of five consensus rating. One learner described the significance of the cognition-emotion coupling embedded in the learning connection with a correlation to Indigenous worldview:

"Here I think about honest reflection and discussion of how emotions can help to access knowledge (this is the heart knowledge/head knowledge connection common to Anishinaabe teachings), it's about supporting one another by demonstrating empathy and sympathy, it's an

openness to communicating how the learning activities, resources, etc. stir emotions in oneself, to see if those emotions are somehow shared or recognized by the larger group, as this all leads to community and social constructivist cohesion"(LS1: 66).

Another learner explicated the complexity of emotions as it relates to other proximal or foundational antecedents: *"emotions of positivity, which to me impact learner confidence, self-efficacy, and success. These are feelings that enable movement in the cognitive and psychomotor learning domains as well" (*LS2:5). In addition to this, several participants across rounds pointed out that negative emotions were not necessarily harmful in relation to CoI learning and that "*some of the listed cognitive emotions can be interpreted as negative, for example, frustration and annoyance. Although I experienced these emotions in my learning journey, they contribute positively to the learning process*" (LS2: 43). One more learner expanded this idea in relation to the affective realm and emotional transitions as being ultimately helpful to both confidence and self-direction and eventually a precursor to motivation. The learner added having felt "*embarrassment and the subsequent drive to self-correct*" (LS1:42). While the statement speaks to a transformative mindset, it also speaks to emotions as an impetus to self-regulation.

Emotions as Learning Regulators

Throughout all of the data collections, learners and facilitators added comments and ratings that conveyed the idea that emotions are important learning regulators. Analysis between round one and two identified three significant reasons that emotions in CoI might be important: as an aid to cognition, as a motivator, and as a means for creating collective responsibility. In round two, the articulations were presented back to the panel in terms of their own statements with fixed choice questions as to why it was vital to learning within a community.

Table 15

Learner Added Indicators of Learning Significance

	This is not important to me	is important because it aids my learning and cognition	is important because it aids my motivation	is important because it increases my desire to give myself to the collective	is imp for a reason not listed
Peer support outside of class requirements	7.69%	61.54%	61.54%	61.54%	7.69%
Recognition of some emotions as a barrier to learning	7.69%	53.85%	53.85%	15.38%	7.69%
Recognition of emotions as an aid to learning, in terms of making meaning	7.69%	69.23%	46.15%	30.77%	7.69%
Learner presence in terms of bringing positive emotions to the environment	7.69%	61.54%	84.62%	53.85%	7.69%
EP as assisting in building the atmosphere of belonging	0.00%	38.46%	69.23%	84.62%	0.00%
EP as assisting in building the atmosphere of trust	0.00%	46.15%	69.23%	84.62%	0.00%
Nurturing caring relationships among peers	0.00%	38.46%	76.92%	92.31%	15.38%
Peers and instructors (expressing concern for persons and their performance)	7.69%	30.77%	46.15%	76.92%	15.38%
Nurturing empathy, diversity and inclusion	8.33%	41.67%	58.33%	66.67%	25.00%
Dealing with individual and collective vulnerabilities	15.38%	23.08%	46.15%	61.54%	7.69%

Table 15 shows learner added indicators as aiding motivation, increasing social and collective responsibility, and community building. In terms of learning significance, the highest-rated item was recognition that emotions are essential to meaning-making (cognitive presence). In terms of social presence, learners endorsed emotional presence as important, adding to the

atmosphere of trust and belonging. In a round three learner consensus statement, learners recognized that at times a negative emotion leads to a significant learning experience. This was indicated with a 4.1 consensus rating on a 5-point Likert scale.

Qualitatively, learners talked about learning regulation in a graduated and reciprocal way "*The apprentice in a COI has to have a minimally active attitude because if he is an eminently passive element, it means that he only receives without contributing the gain itself is compromised* (LS1:12).

Additional Findings

In addition, there was a finding related to both the importance and placement of emotional presence within the existing framework. Comments and rankings dispersed throughout all surveys led to a consensus statement presented with identical wording in both the learner and facilitators. A final consensus statement related to the importance of explicitness of emotional presence was presented to both learners and facilitators in round three. The consensus statement was worded, "being *more explicit about emotional presence would improve the framework*" Table 16 presents the findings of the learner and facilitator final round combined. Only one respondent selected on the low importance level combined endorsement on a 5-point Likert scale of 4.2 resulted in a weighted average rating.

Table 16

Combined Consensus Statement

Consensus Statement						
Being more explicit about an emotional presence in COI would improve the framework						
Learner Round	4.166	1	0	2	2	7
Facilitator Round	4.16	0	0	1	3	2
Combined rating	4.2	1		3	5	9

Findings Summary

This research process yielded several data-gathering mechanisms and integrated findings of emotional presence in Community of Inquiry learning. The research began with a scoping study that articulated a broad set of emotions that may be important in Community of Inquiry learning. The first round of the Delphi led to the articulation of beliefs in emotional presence. One hundred percent of learners and facilitators indicated there is a specific emotional presence evident in CoI learning, and an additional majority indicated being more explicit about emotional presence would improve the CoI framework. Moving through the study, learners identified and ranked specific indicators of emotional presence. In the final round, research participants worked with the existing CoI framework to conclude that emotional presence is evident in social, teaching, and cognitive presence, that it is a shared and reciprocal construct that is malleable over time and educational context of the CoI community. Participants endorsed the need to be explicit about CoI methodology in the early stages of a learning endeavor in order to establish and regulate the emotional presence. Table 17 presents the final consensus statements of the Facilitator Delphi panel.

Table 17

Facilitator Final Consensus Statement

	Agree	Disagree	Consensus	Qualitative Comments
The role that learners and instructors play in EP can fluctuate in terms of responsibility. The fluctuation can be caused by learner maturity, length, of course, type of course (MOOC, etc.)	7	0	100%	*"Over time, but it talks about, you know, setting up things in the beginning, but you don't need to sustain that once a community is built, and I think the same will be true emotional presence. Right. Once the trust once the community is built, you know I don't think you need to have those same strategies throughout the course. But you need them a lot more earlier on."*
The variety of emotions that are implicated in learning is broad and spans across many various taxonomies, including academic, social, and cognitively (epistemic) focused.	7	0	100%	

Chapter Summary

This Chapter outlined findings for a staged, two-subject doctoral dissertation project that began with a scoping study and ended with six Delphi data collection stages. The findings were presented in accordance with the established research questions, coinciding with the preliminary scoping study. The data from the scoping study that informed the question construction in the

Delphi rounds, and three sequences of data collection for two types of Delphi panelists, Community of Inquiry learners and facilitators, were presented.

Integrated findings suggest that emotional presence may already be evident in Community of Inquiry learning philosophy, and, like the other presences, it is a shared and reciprocal construct that is manifest in a distributed way throughout teaching, social and cognitive presences. Through a series of shared coding steps in the final round of the Delphi, there is reason to conclude that pedagogical indicators of emotional presence enactment are tied closely to the labeled overlaps in the Community of Inquiry in setting the climate, supporting discourse, and regulating learning.

Chapter 5: Discussion

Chapter Introduction

This dual method study examined emotions in online learning within the context of Community of Inquiry. Examining the existing literature on emotions in online learning together with experiential views of Delphi participants helped frame a multifaceted understanding of emotional/affective presence and its complex manifestation on Community of Inquiry learning. When I started this study, it appeared that the research on emotional presence in CoI was extremely limited. Three studies had explicitly addressed the concept. As the research progressed, my understanding of where research and articulation about emotional presence within a Community of Inquiry existed expanded exponentially. Through a process of dissecting each of the indicators and emotional labels added by Delphi participants, it became clear that emotions and their importance in online learning are, in fact, primarily included as the gravity of Community of Inquiry (Garrison, 2010) and a centrifugal force as outlined by Lipman (1991).

Present-day, the theoretical foundations of CoI are defined and operationalized by a foundational theoretical framework, practical pedagogical suggestions, and two sets of indicator-based measurement tools. Embedded in all of these are emotional presence conjectures that span across the entire model. When it comes to is emotional presence part of CoI, there is sufficient data to suggest that the CoI model is already congruent with constructionist emotional theories and that the conjectures about both emotional investments and outcomes are diffuse and overlapping. As others have suggested, the issue is that the parsimony of the visual model and perhaps the existing instruments do not explicate the connection between cognition and emotion in enough detail (Garrison, 2010). This may inadvertently create conditions where surface understanding of the model leads to erroneous conclusions about missing aspects. In this regard,

this study supports the idea that the overlaps between the presences are like an emotional/affective centrifuge that acts to create the conditions for cognitive, teaching, and social presence to emerge. Regulating learning, setting the climate, and supporting discourse can be positioned as the verbs that allow the descriptive nouns cognitive, social, teaching to develop. They are the seat of edge emotions (Mälkki & Green, 2018) and the playground for practicality. Thinking of it in terms of a logic model, the overlaps are the social cognitive, emotional inputs that make space for the presences to emerge as outcomes.

This study may contribute a more complex understanding of affective or emotional presence as an intentional, deliberative discourse-based climate setting and self and coregulation (macrogognitive) manifested through the intersections of teaching, cognitive and social presence. This work could provide foundational work to begin developing more practical tools to support faculty and learner development in relation to CoI. The following sections include a discussion of the major findings delineated by the two major parts of the study.

This study used a combination of a scoping study of a decade of emotions in online learning literature and a Delphi process with two stakeholder groups to investigate emotional presence in CoI learning. Scoping the literature provided a framework of emotional terms that were explicated as social or cognitively focused, and therefore potentially relevant to the experience of learning or facilitating in a CoI. Overall, the results of this study are consistent with findings of other studies about emotional presence in CoI that articulate evidence of the existence of emotional presence and the need for the model to evolve to include more specific attention to the articulation of emotional presence (Cleveland-Innes et al., 2013; Cleveland-Innes & Campbell, 2012).

The specific findings here of the diffuse nature of emotional presence and, in particular, the overlaps between the presences as being pedagogically important is similar to results articulated by Peacock and Cowan (2016). They call for more attention to the "linked influences" between the presences as a place for shared pedagogical practice to emerge. At present, research and construct investigation after a course has begun or transcripts are available is only part of the purpose of CoI (Garrison et al., 2010). To be entirely usable along the continuum of course design, teaching, and learning, it needs continued work on illustrating the practice bridge, including procedural tools that help with how to set up a community of inquiry rather than only measurement of the emergence of community. This work has been started through a series of publications that address the front-end establishment of CoI (Cleveland-Innes, 2020; Garrison & Vaughan, 2008). This study may add exploratory findings that suggest this research to practice bridge is inherently connected to a pervasive emotional presence and, in particular, the emotions at the edges and within the overlaps between teaching, social and cognitive presence.

An important consideration for the continued development of emotional presence in CoI is attention to a theoretically congruent model of emotions with which to base any subsequent emotional presence measurement instruments. Additionally, it is important to maintain the collaborative constructivist and coregulation and shared meaning-making foundations of the CoI theory by aligning with emotions models that honor more contemporary psycho-socially sociologically informed views of emotions.

Emotional Taxonomies and Relevance to CoI

This study adopted a multicomponent definition of emotions and applied it as an umbrella term. "Although emotion has long being studied, it bears no single definition"; it is instead an umbrella concept covering affective, cognitive, expressive, and physiological

components which may or may not cohere over time" (Tyng et al., 2017, p. 2). In the literature, emotions, feelings, affect, and mood are often used in interchangeable ways. The definition of an emotion is often tied to the theoretical foundation used in study design. Emotions are often stratified into operationalizable terminology to give some sense of collective meaning. This study showed that objective labeling of emotion was less valuable than the subjective articulation of the role emotion plays in the meaning-making process.

As pointed out in the scoping study, in online learning, researchers are employing several unique stratifications, classifications, or grouping conventions including, academic emotions, non-academic emotions (Cheng, 2014), epistemic emotions (Rienties et al., 2019), aesthetic emotions (Riaz & Mushtaq, 2016), social emotions, basic emotions, discrete emotions, secondary emotions (Parlangeli et al., 2012) and cognitive emotions (D'Errico et al., 2018). In the online learning studies reviewed in this study, only 2.8% used any type of constructionist theories of emotions to frame online learning studies.

Ultimately the most significant finding was that there is no consistent emotional definition being used in online learning studies and that there are multiple overlaps in emotional taxonomy stratification. Having said that, the investigation proceeded with the theoretical assumption that emotions relevant to CoI learning may be primarily implicated in existing taxonomies that point to both social and epistemic categorization.

The idea that emotion research is complicated by varied emotional lexicons, definitions, and theoretical bases is evident across the articles reviewed. While the scoping study pointed to a variety of emotional taxonomies that are being used in online learning studies including, basic, academic, secondary, and epistemic, the integrated results of this full study suggest that the existing taxonomies used in most online learning studies may not be the best fit for CoI learning.

In line with the research by Cowie (2005) and others, recognizable models for emotional research are often used, but science has moved beyond them. Recent neuroscientific emotions research considers emotions as pervasive, socially informed, and socially malleable (Barrett et al., 2007; Immordino-Yang & Gotlieb, 2017). The current emotions and learning science are so congruent with the existing collaborative constructivist notions in CoI that using outdated and individually focused emotional theories and taxonomies may fail to do justice to CoI as a holistic learning framework.

Today the more complex understanding in emotions science points to "concern to capture emotion as it occurs in action and interaction ('pervasive emotion') as well as in short episodes dominated by emotion, and therefore in a range of contexts, which shape the way it is expressed" (Cowie et al., 2005, p. 371). Current emotions science supports what was later articulated by Delphi participants concerning emotional presence and CoI framework indicators; that it is very hard to parse emotional presence indicators out from already identified indicators in CoI because the model itself is holistically integrated and the overlaps between the presences matter. This is congruent with the philosophical underpinnings of the already established presence in CoI as designed to be both mutually dependent and progressive (Garrison et al., 2010).

Emotional theories that frame inquiry learning are much broader than those considered in many online learning studies that point to some subset of academic emotions. It is clear from the dynamic taxonomy mapping provided in chapter four that existing emotions in learning theories used to study in online learning situations may not be the best fit for future Community of Inquiry/emotions study. Referencing Figure (3) in Chapter 4, the tapestry of emotions endorsed in this study spans many existing emotional models. Descriptors used by Delphi participants to describe how emotions propelled thinking or advantage learning led to an understanding that

emotions models that rely on a positive /negative dichotomy or short time frames alone do not give the full picture of the complexity and utility of emotions in online community-based learning situations.

The complexity of this finding fits with the current theory of emotions that calls into question all classical theories of emotions as merely stimulus-response coupling (Barrett, 2016). Barret has spent decades of neuroscience investigating emotions and how they affect the learning brain. The outcome is a multi-level theory of constructed emotions (TCE) that has much to offer collaborative constructivist models of online learning, mainly because it negates any attempt to classify emotions by objective cues, facial indicators, or eye-tracking muscle movement (Barrett et al., 2019). Congruent with the foundations of CoI, Barrett's theory of emotion is holistic. It strongly points to the idea that community-based and social regulation mechanisms like discussion-based teaching or meaning-making reappraisal (collective reappraisal or regulation) are primarily important in learning and behavior change.

Barrett's theory of constructed emotion (TCE) lends neuroscientific support to the idea of learning occurring in CoI as a primarily discourse-based venue, and the Delphi participants' articulation of emotional presence as inclusive of making emotion explicit in relation to presented content. Her summary analysis of emotion is theoretically congruent with CoI and the foundational theoretical conjectures about how collaborative meaning-making becomes a proxy for learning. In Barret's (2017) view, "emotions are constructions of the world, not reactions to it" (p. 17). This elaboration leads to a very powerful way to articulate the emotional-regulating learning overlap in the CoI model as a primary and shared pedagogical tool for the purposeful enactment of the deep learning intentions as indicated in the CoI conceptual framework.

Barrett's theory of emotion "collapses the artificial boundaries between cognitive, affective, and social neurosciences" (Barrett, 2016, p. 16). Expounded in the CoI, this conveys the pedagogical importance of subjugating inferential categories of emotion in favor of inductive exploration and deliberative emotional discourse that recognizes categorization is perceiver constructed, perceiver dependent, and more importantly, socially malleable in the context of learning. Cleveland-Innes and Campbell (2012) have already illustrated this in their finding that the social aspects of CoI showed more emotional granularity. This means that in the context of CoI learning, we should not rely on universal categorizations of "trust" and "belonging" and assume some universal meaning. Instead, as suggested and endorsed by Delphi participants, we make explicit space to ask learners to define and deliberate on community-based emotional goals, including what belonging in a CoI feels and looks like in terms of learner behavior. By making space in CoI, we would recognize that explicitness and discourse-based exploration is essential to self and coregulation in the learning environment and ultimately leads to the learning goal of shared meaning-making.

What is clear from the combination of the scoping study and the Delphi participant findings is a theoretically congruent model of emotions with which to base future CoI emotions research will consider a broader view of emotions and their importance to cognition. Likewise, it is necessary that emotions models are theoretically congruent with the collaborative constructivist core belief of CoI.

Emotional Conjectures and CoI

To reiterate, this scoping study focused on stratifications and terminology related to what is often called social and epistemic emotions. Participants in this study endorsed the emotional

experience of participating in a CoI, framed by the presence of 69 unique social and cognitively aligned emotion labels, as identified from literature in the scoping study.

Learners and facilitators in the Delphi added an additional set of descriptors, resulting in a complicated lexical mapping. In terms of CoI, this offers an opportunity to think broader than traditional emotional definitions and make emotional categorization less important than social-emotional meaning exploration through deliberative discourse. What is essential is not the labels themselves. As has been pointed out by many, including study participants, because of English terms, the meaning behind the emotion may be lost by linguistic reductionism. This finding is in line with much of the recent research on emotional mapping and the theory of constructed emotion that sees emotions as wholly culturally dependent (Pober, 2018).

This question matters for CoI is in the explicitness; Delphi participants spoke of pedagogical vulnerability, making emotions acceptable during the learning process, and explicitly introducing emotion-based learning outcomes and learning goals embedded in theoretical beliefs of collaborative constructivism. Participants articulated granularity and transformation of emotions throughout participation in CoI, indicating support for many theoretical foundations of CoI and congruence with the theory of constructed emotion (Barrett et al., 2019). The participants in this Delphi study endorsed a broad tapestry of English emotional labels. Non-English speakers also added to the idea that by framing the English words, some reductionism existed. This is an important indicator for future emotions research in CoI; categorical endorsement may run the risk of limiting that expression of emotion that is important to learning in groups.

It is clear from the broad endorsement that basic emotions theories and taxonomic labels are not enough to illustrate the complexity of emotional experience involved in joining,

participating in, and eventually experiencing a deep and meaningful learning experience in CoI. This finding is very much harmonized with the work of Lemke, who concluded that "feelings need to be reconceived as more active, interactive, distributed, situated, culture- and event specific, and functioning on and across multiple timescales, just as we have re-conceptualized meaning-making processes similarly in recent years" (Lemke, 2013, p. 71).

Supporting the Development of Emotions in Learning

As discussed above and in chapter 4, when it comes to CoI, all felt, expressed, and socially generated and extended emotions may be important to CoI learning. Though the research question started with the word academic in it, this proved to be non-useful. The findings suggest that when learning within a framework that centers on core emotional goals like belonging and trust, as well as deep and meaningful learning, all emotions, and the meaning-making around them, may have academic significance. At present, the published CoI framework indicators are broken down into a number of distinct lists. There are "indicators" as written for transcript review through a coding protocol (Garrison et al., 2000), indicators as reported for learner post-course self-assessment through the CoI survey (Arbaugh et al., 2008), and indicators as articulated as pedagogical practice in the original and contemporary and writings of CoI theoretical foundations.

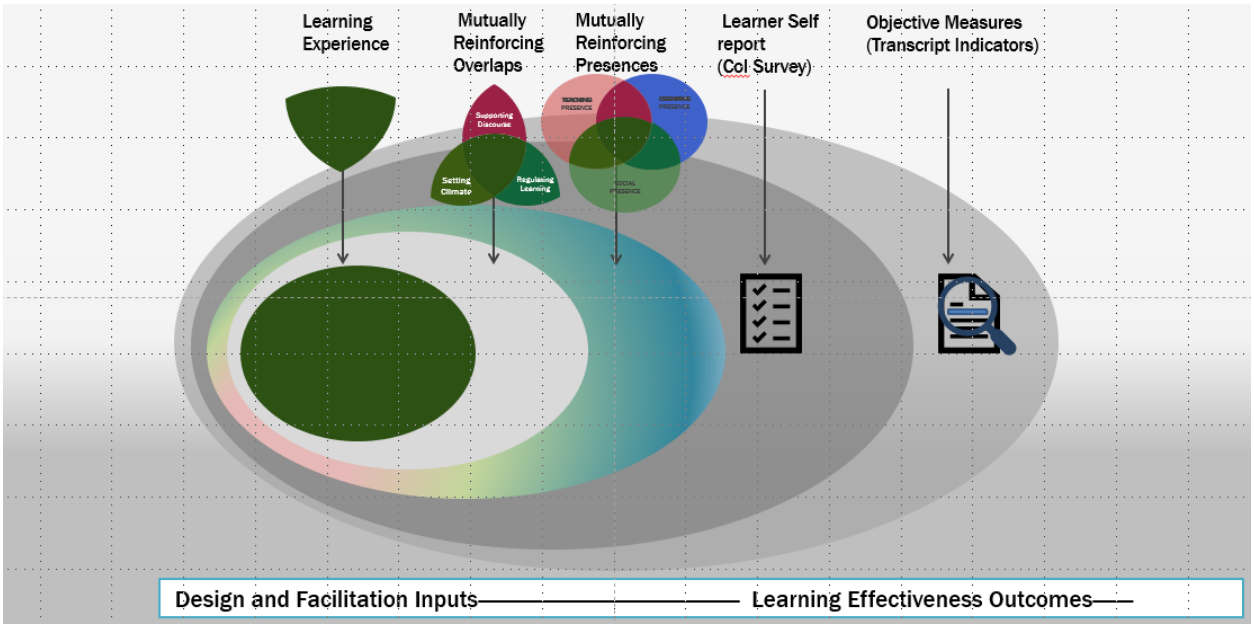
In this study, learners and facilitators added indicators of emotional presence from their perspective of both facilitator and learner roles in survey one and collectively endorsed them in survey two. In the final round, they participated in collectively coding their own thoughts about emotional presence to the existing CoI model.

What was clear from the data gathered in the initial survey was that indicators that were being added as emotional presence were, in many cases, indicators that already existed in some

aspect of the CoI model, sometimes explicitly and other times through congruent wording intent or overlap. It has been said that concepts within the CoI theoretical framework provide guidance in support of inquiry-based learning that leads to deep, meaningful learning (Cleveland-Innes, 2020). The model at present is a complex, multilayered representation of the entirety of the learning milieu. Figure 15 depicts a dissected and exploded view of the CoI model that depicts my own understanding of the model and its theoretical foundations, research-based artifacts, and supports.

Figure 15

An Exploded Model of The CoI Framework and Research Tools



Beginning with the learning experience as the core and moving out to design and facilitation inputs that start from the overlaps give rise to the emergence of three main presences that are deemed measurable in self-report subjective ways through the Community of Inquiry survey instrument (Arbaugh et al., 2008) and more objectively through transcript analysis indicators. However, embedded in each of these component parts are emotional or affective conjectures that support the development and maintenance of important aspects of affective

learning, including social and cognitive processes. Ultimately the findings from this study support Garrison's (2017) claim that emotions have "a pervasive influence on all aspects of a community of inquiry" (p.31).

Clear in emotional conjecture mapping that was done during the analysis of the data is that cognitive presence is about triggering the emotions of curiosity and interest and the feeling of motivation to learn combined with the feeling of appreciation for diverse perspectives. Social presence embraces emotional terms like comfort, sense of belonging, safe disagreement, and trust. Teaching presence, while less obvious, measures a complex emotional construct called a sense of community that is manifested through a combination of emotional attuning, encouraging learner confidence, and honoring diverse perspectives. This theoretical alignment strongly supported the eventual conclusions drawn from the scoping study and experienced Delphi participants that in CoI, emotional presence is a diffuse presence, visible in relation to and overlap with cognitive, social, and teaching indicators and enacted more purposefully in relation to shared climate setting, supporting discourse (deliberative dialogue) and regulating learning. The added indicators of learner responsibility for emotional presence (figure 13) confirm that experienced CoI learners and facilitators conceive a mutuality of responsibility for the enactment of emotional presence. They articulate this in the way they relate and extend emotions of acceptance and belonging (Setting Climate), give of themselves to the collaborative construction of knowledge (Supporting Discourse), and participating in team-based macrocognition (Regulate Learning).

This finding supports the collaborative constructivist underpinnings and lends practical examples of the learner responsibility and actions the idea that "it is important to appreciate that each individual in a collaborative constructivist community of inquiry manifests each of the

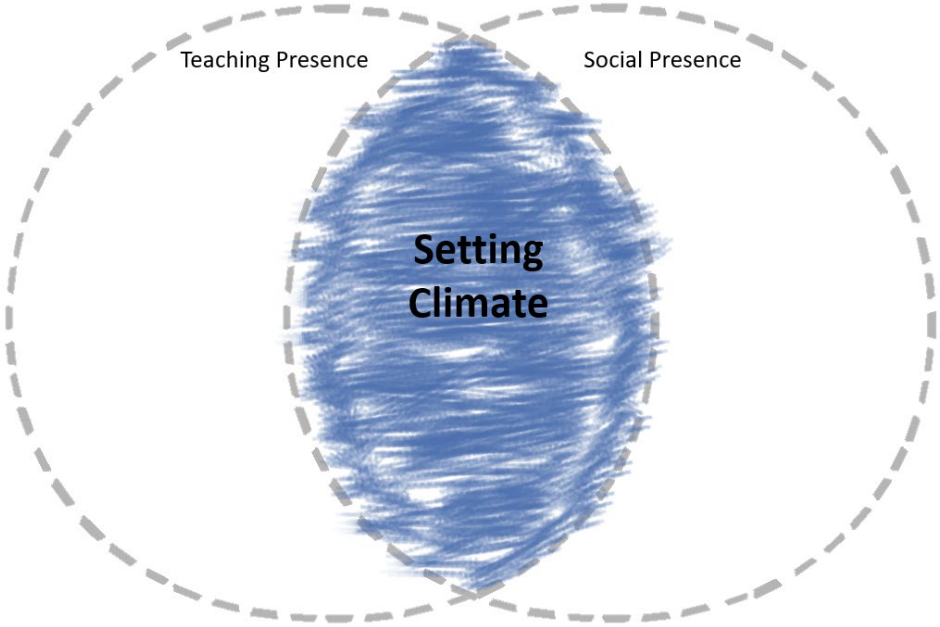
presences. That is, participants must take responsibility for aspects of social, cognitive, and teaching presence" (Garrison, 2017, p. 29). This aligns well will original writings about CoI foundational philosophy and, in particular, the writings of Mathew Lipman in relation to caring thinking (Lipman, 1991). The Delphi participants offered many indicators of the enactment of emotional presence that aligned clearly enough to be explicated in detail and anchored to the existing overlaps in the CoI model.

Emotions and Setting Climate

Setting climate is visually represented at the overlap of teaching and social presence (figure 16). It has been previously claimed that the importance of social presence and where it overlaps with teaching presence (setting climate) is often overlooked (Rourke et al., 2001).

Figure 16

A Visual Depiction of The Overlap Between Teaching and Social Presence



Learners and facilitators in this Delphi talked about pedagogical indicators or enactment of emotional presence as setting a tone, recognizing learners as whole beings, creating safe explorations space, role modeling emotional vulnerability, and being explicit about the importance of learner-learner interaction as a foundational philosophy. Shea and Bidjerano (2009) have previously outlined that facilitating in order to increase learner comfort in the early stages of a CoI may also overlap even further with cognitive presence by way of an increase in indicators of cognitive presence (Shea & Bidjerano, 2009). It is significant that when asked to endorsed specific social-emotional labels related to CoI learning, facilitators endorsed climate-specific belonging, trust, and gratitude as the three most often occurring. Learners similarly noted gratitude in the top three, followed by optimism and altruism. This finding is in line with research by Chen et al., (2013), who found that altruism contributed to trust and subsequent climate and knowledge sharing behavior in online communities. Taken together, the descriptors Delphi participants used to describe the emotional anchors of climate setting mirror the work of a recent related to a study of the award-winning practices of online facilitators that found:

> that the facilitator role extends beyond just course delivery and includes broader pedagogical tasks of welcoming students, helping students manage time and feel comfortable, being responsive to students' needs, being "present" in online activities or forums, communicating/checking in with students regularly, assigning activities and formative activities, providing timely, actionable, and substantive feedback, and fostering student engagement, interest, and interaction. (Martin et al., 2019, p 200)

Essential to the consideration of this overlap was the articulation of the enduring and graduated nature of climate setting, a suggestion that perhaps speaks to a review of renaming this

overlap to more accurately reflect the continued cultivation of climate. Linking back to one Delphi panelist words

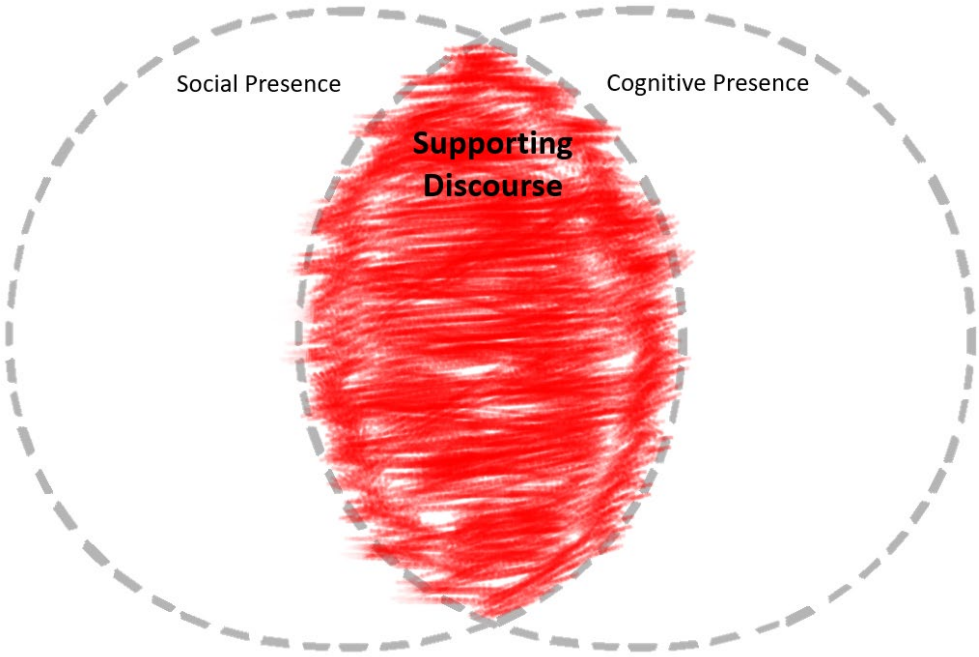
> *Instructors should be gardeners. Those best know the adequate amount of the sun, water, and type of the soil. If we want to see that seeds grow and blossom, we need to have this type of knowledge. Similarly, an instructor is a gardener or, as we know, a facilitator that scaffolds learners. (FS1:L73)*

Emotions and Supporting Discourse

At the border of social and cognitive presence is supporting discourse (Figure 17).

Figure 17

A Visual Depiction of The Overlap Between Social and Cognitive Presence



For Garrison, purposeful discourse describes the overlap between social and cognitive presence – "all of which is predicated upon teaching presence reflected by the design,

facilitation, and direction of the inquiry process" (Garrison, 2021, para 5). Learners and facilitators in this study pointed to the need to support and encourage emotional reactions to content, provide personalized examples, be empathetic in interactions, and build positive and affirming feedback. Collectively learners and facilitators specifically articulated the need to acknowledge and encourage emotion and let it serve as a guide for practical inquiry. Perhaps beyond just supporting discourse, study participants expressed emotions as deliberate stimuli to meaningful dialogue. The emotional presence suggestions added by participants are very much in line with early CoI writings and the idea that to make CoI work, the climate of support will be the catalyst to sustained participation and reflective discussion.

Garrison (2003) expanded that "social presence is intimately connected to cognitive presence in that the subject and purpose of much discourse is of a cognitive nature and focused on understanding a specific curriculum" (p.84). He indicated a large pedagogic challenge is ensuring the stimulation of cognition and moving towards critical thinking while balancing the sense of purpose and graduated development of social presence (Garrison, 2017). The Delphi generated indicators, when taken together, reflect the learning-related tension of emotions that Garrison (2017) articulated when he advised that a community must be both "inclusive and critical…because it is through balancing these seemingly contradictory social and academic elements that a quality learning environment is created" (p. 37). Lipman similarly articulated this importance of emotions as a point of educative discourse when saying, "if we want to assure that they [emotions] are reasonable, it would help if we were to treat them as reasonable. And if we want to assure that they are educable, we should try treating them as educable" (Lipman, 2003, p. 131).

In reference to the emotion-cognition coupling, Rolim et al. (2019) similarly concluded indicators of the affective category of social presence had solid links with the two high levels of cognitive presence (i.e., integration and resolution). Secondly, that indicators of interactive messages of social presence were more connected to the two low levels (triggering events and exploration) of cognitive presence (Rolim et al., 2019). The endorsement of the emotions most strongly linked to cognitive processes in this study supports the idea that in dialogue with others in CoI, learners are able to access emotions that are important across the learning continuum.

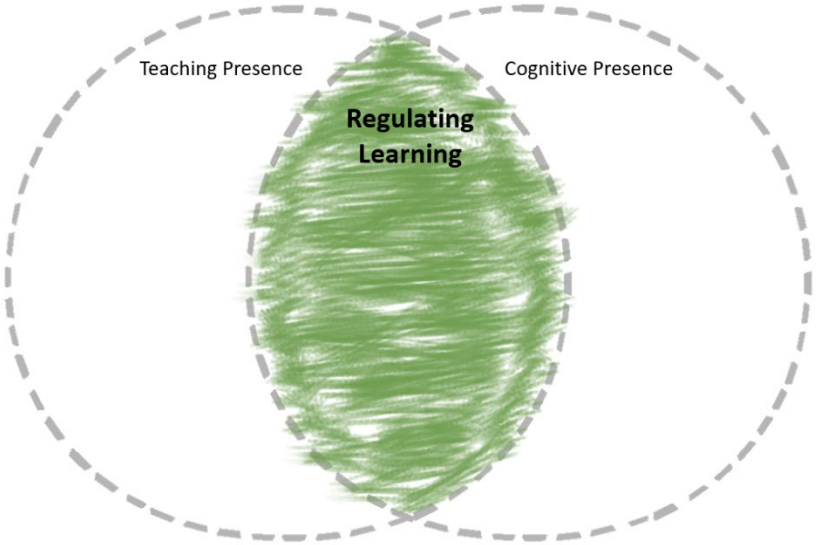
In order to explicate the emotional presence and pedagogical intent of the transactional and graduated nature of supporting discourse in CoI, it might be more aptly named *sustaining deliberative dialogue.* London (2013) emphasizes that the important parts of deliberative dialogue emanate from both the participants [learners] and the facilitator, and they include a strategic method of collective thinking. Like the emotional presence indicators offered by Delphi participants, the specific indicators of a deliberative dialogue are distilled down to listening deeply, perspective taking, examining assumptions, managing privilege-based conflict, and looking for points of agreement (London, 2013; Nagda & Gurin, 2007). Deliberate, intentional discussion-based strategies are one aspect of moving towards deeper learning outcomes because peer communication is significant in emotional transition (Angelaki & Mavroidas, 2013) and, importantly, have recently been found to have an emotional regulating function, including reducing anxiety and increasing participation (Correia, 2020).

Emotions and Regulating Learning

At the overlap of teaching and cognitive presence in the CoI framework is the overlap entitled regulating learning (Figure 18).

Figure 18

A Visual Depiction of the Overlap Between Teaching and Cognitive Presence



To date, the pedagogical practice that facilitates learning regulation has not been well defined. Although clear in much of the CoI writing is the idea that reflection and discourse are two essential elements of inquiry (Garrison & Vaughan, 2008). Peacock and Cowan (2012) partially illuminated this overlap to be about a learner's active participation in critical reflection and called it deepening understanding. Participants in this Delphi study identified several emotional indicators that contributed to regulating learning. These included: igniting motivation by choosing discussion prompts, acknowledging learning is emotional, seeing learners as whole beings, modeling emotional reaction to the content, and encouraging learners as teachers. Additionally, learners endorsed emotions as learning regulators in three distinct ways, as an aid to cognition, as motivators, and as a means for creating collective responsibility. In this present study, the explication of emotional indicators of learning regulation closely echoes what Dinsmore and Zoellner (2018) described as metacognitive experiences, being 'cognitive or affective experience that pertains to a mental operation' linking regulation behaviors and metacognitive processes.

In terms of regulating learning, it is clear from this present study and supported by many prior studies that sometimes what have been traditionally labeled as negative emotions have an important place as precursors to meaningful learning (Artino & Jones, 2012; Garrison, 2017; B. Lehman et al., 2012; Lipman, 2003; Pekrun et al., 2002). This idea is akin to Mathew Lipman's original CoI notion of education of emotions, seeing them as malleable through the educative process and a strong indicator of change and learning. The importance of self-regulation in relation to learning presence has been previously identified as lacking when learning presence has been measured as a separate construct (Pool et al., 2017). In the Pool study, the suggested antidote to lack of self-regulation was increased teaching presence. The importance of self-regulatory and co-regulatory processes on CoI has previously been highlighted (Shea et al., 2014). This somewhat echoes the idea of being more specific and inclusive in describing regulating learning as more than just unidirectional or bidirectional and rather as multidirectional and involving self and coregulation.

Taken together the literature, the Delphi participant voices, and the theoretical roots of the CoI can lead us to describe the regulating learning overlap as an extension of the shared metacognition construct described in Garrison and Akyol (2015) to include the emotional dynamics of collectively unfolding cognitive processes. This might extend to stronger operationalization of the construct to include macrocognitve processes that simultaneously deal with the collective emotionally laden tasks of directing attention, sensemaking, planning, maintaining common ground and building knowledge in collaborative contexts (Fiore et al., 2010).

Emotionally Present Pedagogy

Many who have written about CoI have explicated the importance of the three-component interrelatedness (Akyol et al., 2009; Garrison & Akyol, 2015; Peacock & Cowan, 2016). Facilitators and learners in this study identified that the pedagogical elements of CoI that help regulate, build, or sustain academically important (inter/intra and collective) emotions occur across many aspects of the interrelatedness of the presences.

This issue was explored using a variety of questions related to indicators of emotional presence and the learning significance of endorsed emotional labels. Learners and facilitators in the Delphi added emotional presence manifested through behavioral indicators (pedagogical practice) emanating from both learners and facilitators. The study explored taxonomic labels for two kinds of emotional stratifications through iterative surveys established in the literature as social emotions and cognitive emotions. Participants in the study added additional 42 emotional labels. After three rounds of surveys, a consensus statement about the diffuse nature of emotional presence in CoI was achieved. Shea et al. (2010) have previously outlined that reliably identifying affect in courses is difficult. This research supports that idea but clarifies that it is a worthwhile difficulty, and the self-report articulation and exploration in discussions during the course may be as important to learning as reliably coding it in later transcripts.

The scoping study that proceeded the Delphi study highlighted that most research into emotions in online learning is focused on primarily individually based learning scenarios. Further analysis revealed that few studies are beginning to incorporate more socially informed emotions taxonomies or understanding emotional theories congruent with collaborative constructivist theoretical frames. The kinds of emotional presence indicators added and endorsed by study participants reflected behavioral and attitudinal indicators and displayed different

emphasis points in time. The indicators sometimes had clear associations to already established indicators embodied in teaching, cognitive or social presence. The findings of this study support previously articulated foundations that a major consideration in CoI is the three-component interrelatedness and factors that enhance each other (Akyol, Garrison, & Ozden, 2009). Despite the calls for more attention to emotional presence, this study supports the idea that emotion-related conjectures already contained in CoI philosophy are ripe for refinement and more detailed explication regarding their connection to deep and meaningful learning.

Caring About Emotions in Learning

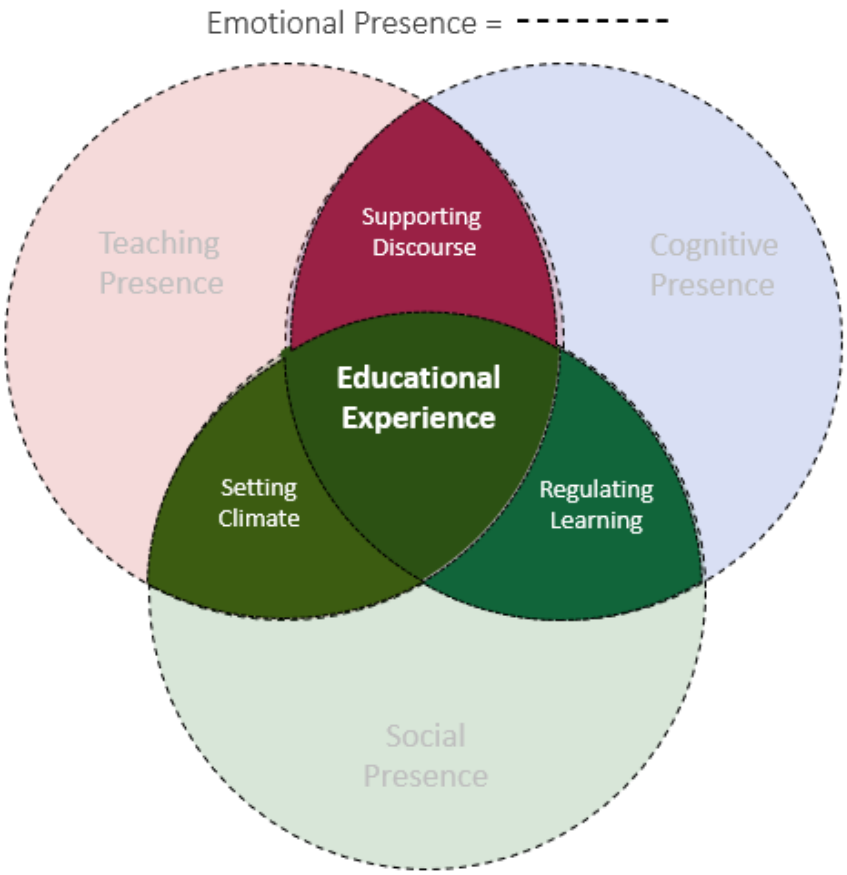
Affective learning is considered in many learning frameworks. Amann (2013) defines affective learning as "the acquisition of knowledge as a result of paying attention to and honoring our feelings and emotions" (p.4). The primary reason is that emotions have been identified since the origin of the framework as the primary pedagogical goal of CoI. Trust and belonging are clearly illustrated as emotional antecedents to community building. Design conjectures included in CoI and its two major research instruments are replete with emotional conjectures across all three presences. At the heart of Community of Inquiry is the belief that by structuring an online course with attention to the multifaceted presence, there is a greater chance that deep and meaningful learning will be the result (Garrision, 2003). This is perhaps the area that has drawn the most criticism. Terry Anderson, one of the originators of the CoI model, recently lamented the imperative "for the communities of inquiry model to evolve into a learning model, that recognizes the importance of motivation, self-efficacy, and personal skills in effective communities of inquiry" (Anderson, 2018, para. 1). Other research echoes this notion, and there have been several attempts to expand the CoI model to make the connection between the inra/inter level of emotions more explicit while still honoring the frugality and collaborative

constructivist philosophical foundations of the model (Cleveland-Innes et al., 2014; Cleveland-Innes & Campbell, 2012; Majeski et al., 2018; Stenbom et al., 2016). Garrison, in his review of research on CoI in the third version of his book, suggested the real question is "a unique emotional presence element creates significant challenges and raises the question whether this is justified empirically and theoretically" (p. 41).

This study supports the idea that a unique emotional presence element is not justified theoretically. Through a detailed analysis of Delphi subject added indicators of emotional presence and three rounds of exploration, the study found that the CoI framework has indicators of emotional presence weaved throughout. The existing model in its philosophical underpinnings has partially addressed the importance of emotions either within the individual presence articulation or in a preliminary way in the labeling and articulation of the overlaps and across the presences in data collection tools. Participants in this study were unequivocal about the existence of an emotional or affective presence; however, the indicators and pedagogical articulations offered were rarely unique enough to be parsed out as separate from previous foundational articulations. Through a process of dissecting the established CoI model in conjunction with the emotional indicators and language used by the Delphi participants, there is enough data to suggest that emotional presence is a distributed presence. Further that the existing CoI framework might be better depicted by softening the boundaries of the presences to visually depict emotional presence on the edges. Additionally, remove the hard lines between the presences to depict better the movement between the mutually reinforcing nature of the overlaps. A reimagined model is depicted in Figure 19.

Figure 19

A Reimagined CoI Model Including the Diffuse Emotional Presence



As articulated in the literature review that preceded this research, learning is a highly emotional endeavor, and emotions are implicated in the deepest levels of socially informed cognition and learning. “Having insight into one's own and others' personal, relational dynamics and group dynamics is critical in facilitating online learning environments” (Bentz & Lazarevic, 2015, p. 68). As others have already suggested, “the CoI framework is enhanced by incorporating emotional presence as a critical part of learning presence, one especially salient for the adult online learner” (Williams, 2017, p. 129).

While Garrison (2016) recognizes that “emotion is an affective state that fluctuates with the social conditions and, therefore, is within the purview of social presence” (p.41). This study perhaps leads to an indication that it is bigger than a social vehicle. Emotions are much more than social; in fact, current emotion theory places the centrality of emotion in the cognitive domain, and more importantly, for the philosophical underpinnings of CoI articulates emotions themselves as being collaboratively constructed.

Chapter 6: Conclusion

Designed learning environments embody conjectures about learning and instruction, and the empirical study of learning environments allows such conjectures to be refined over time (Sandoval, 2004, p. 213).

This study set out to explore the issue of emotional presence in Community of Inquiry learning. A very recent synthesis of distance education research reinforces the prominence of the impact CoI has had on the distance education field (Bozkurt & Zawacki-Richter, 2021). That importance leads to a responsibility to maintain and refine design conjectures as new science emerges.

Affective science and the importance of emotions in learning and group cohesiveness has come a long way since 1999 when in relation to CoI coding Rourke and colleagues remarked, "emotional indicators more trouble than they are worth" (1999, p.12). The findings of this study support the idea that emotions and emotional presence are important for explicating the theoretical beliefs about trust and belonging and, perhaps more importantly, for their importance to the social and cognitive tasks that are implicated in deep and meaningful learning. It has been over 10 years since a reexamination of CoI presences outlined the need for more research into the interactions of articulated CoI constructs and attention to the assumption of deep and meaningful learning as an outcome (Shea et al., 2010). The same paper voiced the need to develop more meaningful measurement tools that investigated the specific instructor role in presence enactment.

While this study does not purport to fill this gap, it does provide an exploratory starting point for the continued development of both facilitator and learner self-assessment tools, with a particular emphasis on the important emotional edges of presence. The results of this study offer

an extended understanding regarding the presence of emotions and emotionally infused learning in an online Community of Inquiry. It has provided an initial exploration of the presence of multifaceted emotions that affect cognition and social behavior, and therefore highlights which emotions are most prevalent and malleable through socially infused, emotionally present pedagogy.

Recommendations for Future Research and Practice

The call for greater attention to emotions in established education models is not unique to CoI. A very recent investigation into Merrill's first principles found the same chasm (Honebein, 2019). These calls for more explicit recognition of emotions are a sign of the increasing multidisciplinary understanding of emotions in human functioning and particularly the advances in cognitive neuroscience that supports the need for greater attention to affective learning components (Immordino-Yang, 2016).

Garrison has previously outlined the need to develop more practical tools that assist with the front end or practical enactment of Community of Inquiry pedagogy "we now see transcript analysis as just one of many lenses through which researchers can investigate and measure the development of a community of inquiry in online, face-to-face or blended models of learning" (Garrison, 2010, p 8). This need for is especially true in terms of recognizing and developing stronger articulation of the shared role and graduated learner responsibility for collaborative foundations of CoI.

> The current status of [Distance Education]DE as being a part of mainstream education has both opportunities and threats. As an opportunity, this transformation into mainstreaming requires change, adaptation, and evolution in theory and practice and thus is a catalyst for the advancement of DE as a discipline (Bozkurt, 2019, p. 502)

Distance, digital and blended education is experiencing a time of massive interest. The 2020 global Covid- pandemic has been the impetus for renewed and initial interest in the structure, design, and pedagogical practices that lead to effective online learning. A recent content review of educational technology journals found, “The five most active topics in these top journals are teaching methods, online/web-based learning, social networks and communities, content learning and collaborative learning, and blended learning” (Alsofyani, 2021, p. 563).

Though CoI was born from a largely text-based discussion teaching, it has proven to be a valuable pedagogical framework for in-person, online, and blended teaching and learning delivery. It has been demonstrated to be adaptable and resonant to education delivery using many emerging technologies. Writings and adaptations about using CoI to transition fully online courses during the 2020 pandemic span a variety of disciplines (Erickson & Wattiaux, 2021; Khalili, 2020; McAleavy & Gorgen, 2020; Tan, 2021). The results of this study could be used to support additional research on the CoI in terms of model elaboration and subsequent practical pedagogical guidance. Complementing the work of those who have already begun to explicate how to intentionally design and facilitate to regulate emotional presence in CoI (Majeski et al., 2018; It would be expected that it could offer assistance and implications for course development, course evaluation, and professional development programs both within universities and in the distance-supported workforce development programs**.**

The landscape of education is changing rapidly. Technological innovation, combined with the urgency to adopt distance learning alternatives during the Covid-19 pandemic, has helped to create an appetite to embrace models that holistically attend to the complexity of the learners' lifeworld and learning experience. This exploratory Delphi uncovered some strong consensus about the importance of emotional presence, emotional literacy, emotional attuning, and

emotional regulation and navigation as important aspects in CoI learning. Recent advances and recent comfort with technology that was intensified by the pandemic have opened doors to broader adoption of CoI within the online learning community. Of particular interest is some recent work about presence and agency as overlapping constructs that create engagement in online learning mechanisms that include more sensory input like augmented reality (AR), virtual reality (VR), and extended reality (XR) (Fink, 2020). A recent systematic review of the constructs of deep and meaningful learning using these mediums for distance education describes recommendations that are very congruent with the adapted CoI model suggested by this dissertation. "Improvement recommendations include meaningful contexts, purposeful activation, learner agency, intrinsic emotional engagement, holistic social integration, and meticulous user obstacle removal" (Mystakidis et al., 2021, p. 1). An interesting future direction might investigate how the conceptions of mixed reality telepresence fit with the presence articulations of CoI, and how the framework might address all of the suggested recommendations for improving mixed reality learning mediums.

It is clear from this research that both learners and facilitators articulated both indicators of and pedagogical avenues to learner agency contained by a variety of already established CoI constructs. A deeper understanding of the emotional aspects of learner agency is an area for future research that could help those new to the virtual learning space by way of new technologies understand the complexity of the CoI overlaps and how they translate into emerging learning mediums. In addition, there may be theoretically congruent utility in renaming the overlap currently called *supporting discourse* to add *deliberative dialogue* and remove the word setting from climate to reflect the enduring and reciprocal continuum of the cultivating climate goals as articulated in the original model and by the Delphi panelists in this study.

Strengths and Limitations

A strength of the study was the use of a community of experienced CoI practitioners and learners to explore emotional presence indicators in the Community of Inquiry through a process of iterative and focused data gathering. The Delphi process turned out to be a very opportune method to pursue inquiry about Community of Inquiry. As has been established by other researchers, Delphi is one of the only research methods that allow participants to interact with the data of other participants with anonymity and void of coercion (Ogbeifun et al., 2016). In total, 19 of 20 participants remained in the study for the entire process. Planned processes in this study were able to control the common Delphi limitation related to participant attrition. In addition, the diversity of the Delphi panel was evident in gender, language, and Country of origin; heterogeneity of subjects is one avenue for increased credibility (Ogbeifun et al., 2016).

Delphi methodology staged rounds made possible multiple levels of validation. The multiple staging of Delphi involves a specific design for both member checking and data authentication (Alase, 2017). In keeping with Delphi methodology, anonymity was maintained throughout all stages. Throughout all methodological stages, I used an honest effort to address issues of credibility and validity with clear descriptions, inference, and meaning making (Cohen, Manion, & Morrison, 2011). A clear strength of the study is that experienced CoI learners and facilitators were unequivocal about the existence of emotional presence in CoI. That belief was integrated through qualitative and quantitative analysis and solidified in the final round of collective coding and consensus statements. This finding provides an additional level of validity to continue the research agenda into emotional presence in CoI and the critical work of those who started it (Cleveland-Innes & Campbell, 2012).

This study is a doctoral-level single researcher study. Inherent in any single researcher study are issues of researcher bias; this bias may be present in both the coding and content analysis decisions in both the scoping study and Delphi portions of this dissertation.

Additional limitations include the fact that the study of emotional terms in both the literature scoping and Delphi exploration occurred only in English. Therefore, meaning-making and emotional granularity of terms are constrained to English language conventions.

A third limitation is related to the sample size of the Delphi panel. Though a 20-member total Delphi panel meets the published criteria for valid sample size, it remains a constraint that it is a small-scale study. A different sample of panelists may have yielded different initial articulations of indicators of emotional presence.

Chapter Summary

This final chapter provided a concluding summary of this doctoral research project. This chapter highlights the need to continue the research agenda into emotional presence in CoI, framed by the growing importance of emotions in learning and some of the technological advances in online learning delivery. Suggested future directions for the development of pedagogical tools are provided. The strengths and limitations of the study are outlined.

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Appendix A Delphi Study Invite Facilitators

INVITE TO PARTICIPATE IN A RESEARCH STUDY

Title of Research Study: *Emotional presence indicators in an online Community of Inquiry: A scoping review and Delphi Study of Student and Facilitator experience*

Principal Investigator(S) Debra Dell, EDDE Doctoral Candidate, Athabasca University
Email:ddell1@athabasca.edu

You are being invited to participate in a modified Delphi Study. Delphi is methodical polling of the opinions of an expert panel knowledgeable on a given topic through iterative surveys to reach group consensus. The goal of this modified Delphi Study is to better understand indicators of emotional presence in an online Community of Inquiry (COI).

You were invited as a possible participant in this study because you have been identified as an experienced CoI practitioner.

Purpose:

The purpose of this research study is to develop a deeper understanding of emotional presence in CoI.

Procedures:

If you volunteer to participate in this Delphi Study, we will ask you to do the following:

(1.) Read this request letter, consent to participate after reading the consent form, complete the Demographic Questionnaire and round one survey located at the following hyperlink by DATE here.

If you are one of the first ten respondents WHO MEET THE CRITERIA, you will be a panel member in this Delphi Study. In subsequent rounds, you will be able to answer anonymously through a generic hyperlink and preassigned code.

(2.) Two weeks later, you will receive the second survey, which you will respond to within two weeks.

(3.) Two weeks after that, you will receive an invite to participate in an anonymous asynchronous/or synchronous consensus activity using Mentimeter polling software. Your contribution at this stage will form the final round of the study

Time Commitment:

Your participation to participate in the Delphi Study will take approximately two hours over two months. THIS TIME ESTIMATE includes the length of time it takes to read, consent, and

complete each survey round which will be approximately thirty minutes for each of the three surveys.

This study is being supervised by Dr Martha- Cleveland Innes, Email martic@athabascau.ca

This study has been reviewed by the Athabasca University Research Ethics Board. Should you have any comments or concerns regarding your treatment as a participant in this study, please contact the Office of Research Ethics at 1-800-788-9041, ext. 6718 or by e-mail to rebsec@athabascau.ca.

Appendix B Participant Consent Form

Emotional presence indicators in an online Community of Inquiry:

A scoping review and Delphi study of student and facilitator experience

Principal Researcher: Debra Dell
EDDE Student
Athabasca University
Email: ddell1@athabasca.edu

You are invited to participate in a research study about emotions and their manifestation in online education within a Community of Inquiry. I am a Doctor of Education in Distance Education student. I am completing this study in partial fulfillment of this degree under supervision. This study is being supervised by Dr. Marti Cleveland -Innes. Dr Cleveland-Innes can be contacted at martic@athabascau.ca.

As a participant, you are asked to take part in this Delphi study by contributing to three steps (rounds) of data collection. This will include an initial reading of a scoping study, and responding to 2 rounds of online survey questions, and a final synchronous and anonymous online meeting for dissemination and finalization of results. Participation could take up to 2 hours of your time over a period of 2 months.

There is no expected health, socio economic or cognitive risks to participation in this study. Involvement in this study is entirely voluntary and you may refuse to answer any questions or refuse to share information that you are not comfortable with. Identifiable data will be limited to categories that assist in connecting with you and categorically reporting diversity of the expert panel. This data will include age, sex, geographic location, email, and telephone number. Identifiable information will be anonymized through the assignment of pseudonyms or codes and reported in aggregate form only.

You may withdraw from the study at any time by simply by indicating you wish to withdraw. Your completed survey data cannot be withdrawn after it has been analyzed, collated and anonymized.

Please note that interview and survey data may be initially collected using software tools that may be stored on a server in the U.S. and is subject to access under the U.S. Patriot Act until it is transferred from the server to the researcher's computer.

All hard copy data will be kept in locked cabinets. All electronic data will be kept in a password protected, encrypted computer. All identifiable information and records will be destroyed by confidential shredding and electronic records will be deleted when all project requirements have been met.

Results of this study will be initially disseminated to you as a research participant. Results may additionally be disseminated through conference presentations and peer-reviewed publications.

If you have any questions about this study or require further information, please by using the contact information above.

This study has been reviewed by the Athabasca University Research Ethics Board. Should you have any comments or concerns regarding your treatment as a participant in this study, please

contact the Office of Research Ethics at 1-800-788-9041, ext. 6718 or by e-mail to rebsec@athabascau.ca.

Please print a copy of this consent form for your records

Please indicate your consent by signing here.

_____ **Date _____**

Appendix C Ethics Approval

Athabasca University
RESEARCH CENTRE

CERTIFICATION OF ETHICAL APPROVAL

The Athabasca University Research Ethics Board (REB) has reviewed and approved the research project noted below. The REB is constituted and operates in accordance with the current version of the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (TCPS2) and Athabasca University Policy and Procedures.

Ethics File No.: 23978

Principal Investigator:
Ms. Debra Dell, Graduate Student
Faculty of Humanities & Social Sciences\Doctor of Education (EdD) in Distance Education

Supervisor:
Dr. Marti Cleveland-Innes (Supervisor)

Project Title:
Emotional Presence Indicators in an Online Community of Inquiry: A Scoping Review and Delphi Study of Student and Facilitator Experience

Effective Date: June 09, 2020 **Expiry Date**: June 08, 2020

Restrictions:

Any modification or amendment to the approved research must be submitted to the AUREB for approval.

Ethical approval is valid *for a period of one year*. An annual request for renewal must be submitted and approved by the above expiry date if a project is ongoing beyond one year.

A Project Completion (Final) Report must be submitted when the research is complete *(i.e. all participant contact and data collection is concluded, no follow-up with participants is anticipated and findings have been made available/provided to participants (if applicable))* or the research is terminated.

Approved by: **Date: June 09, 2020**

Cheryl Kier, Chair
Faculty of Humanities & Social Sciences, Departmental Ethics Review Committee

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