Communities of Inquiry in Online Learning

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INTRODUCTION

The focus of this chapter is on a framework that has drawn considerable interest in creating collaborative communities of inquiry in online learning environments (Garrison, Anderson & Archer, 2000). The goal is to provide an overview and update of the Community of Inquiry Framework with a particular focus on social, cognitive and teaching presence that constitute the framework. Creating and sustaining a community of inquiry requires an understanding of the progressive or developmental nature of each of the presences and how they interact. This chapter will explore what constitutes each of the presences and implications for practice.

COMMUNITY OF INQUIRY

A community of inquiry is not a new perspective in higher education. It builds upon existing collaborative-constructivist educational assumptions that have historically been identified with higher education. Moreover, many of the constructs and rationale evolved from the research literature in adult and higher education. At the same time, however, the assumptions of this framework foreshadow a new era of distance education. It reflects much of the work being done in the area of online learning. The concept of a community of inquiry is being used extensively to understand and guide the design and delivery of online learning experiences.

A community of inquiry goes beyond accessing information and focuses on the elements of an educational experience that facilitate the creation of communities of learners actively and collaboratively engaged in exploring, creating meaning, and confirming understanding (i.e., inquiry). Constructing knowledge through discourse and shared understanding requires more than disseminating information either through a study package or lecturing. It requires a commitment to and participation in a community of learners that will support critical reflection and collaborative engagement.

This deep and meaningful approach to learning is core to a community of inquiry and is becoming a practical necessity in an era where the creation of relevant and timely knowledge is of paramount importance.

The Community of Inquiry (CoI) framework recognizes the importance of the environment in shaping the educational experience. A CoI is a collaborative environment founded upon open but purposeful communication. The essential elements in this process are social, cognitive and teaching presence. It is in the overlap of the three presences where the essence of a community of inquiry exists and meaningful collaboration occurs. The elements of the CoI framework can be found in Figure 1.

Social Presence

Of the three presences, social presence has evolved the most from the original conceptualization. The original definition was largely a socio-emotional construct and did not reflect the full complexity of this concept in establishing a purposeful educational community. It did not adequately speak to the overlap with the other two presences or its developmental nature. The definition offered here for social presence is the ability of participants to identify with the community (e.g., course of study), communicate purposefully in a trusting environment, and develop inter-personal relationships by way of projecting their individual personalities. It has been shown that text-based online communication, lacking in nonverbal communication cues (i.e., body language or physical presence), does not seriously restrict social presence (Rogers & Lea, 2005).

Rogers and Lea (2005) provide evidence that it is shared social identity with the group and not personal identity that is crucial for cohesive group behavior. In fact, interpersonal bonds and conflicting personal goals could undermine the cohesion of the group. For example, strong personal relationships may restrict critical discourse. For this reason, to build social pres-

Figure 1.

ELEMENTS	CATEGORIES	INDICATORS (examples only)
Social Presence	Open Communication Group Cohesion Personal/Affective	Learning climate/risk-free expression Group identity/collaboration Self projection/expressing emotions
Cognitive Presence	Triggering Event Exploration Integration Resolution	Sense of puzzlement Information exchange Connecting ideas Appling new ideas
Teaching Presence	Design & Organization Facilitating Discourse Direct Instruction	Setting curriculum & methods Shaping constructive exchange Focusing and resolving issues

ence and community in an educational context, it is important to begin with group identity.

If the intended result of social presence is to confer on the group greater capacity to communicate and collaborate, then the group will work more productively to the extent that group members identify with the group, thus making the group more cohesive. (p. 153)

This perspective is supported by research into online learning communities (Baker, 2003; Conrad, 2005).

Conversely, if collaboration and community are the goals, as they are in most higher educational contexts, then group identity and cohesion are critically important for open communication and collaborative learning activities. The design challenge is to integrate and balance the development of group and personal identity. However, the initial priority will naturally be on group identification. In time, interpersonal relationships will develop and help to sustain a community of inquiry, often beyond the formal limits of the course. In short, social presence develops incrementally that begins by focusing first on open communication and cohesion (group identity) and, over time, personal and affective affiliations (personal identity).

In practical terms, this means that instructors should not over-emphasize socio-emotional or interpersonal identity at the outset. Initial activities should be built around course and group identity issues such as exploring and negotiating expectations and creating a climate for open communication. Students should be given an opportunity to introduce themselves and get to know others through interactions focused on the common goals of the course and group. Developing open communication, cohesion and interpersonal knowledge is best done in small groups. Moreover, consideration should be given to sustaining these subgroups until students gain some comfort.

Cognitive Presence

Cognitive presence goes to the heart of the community of inquiry. It is defined by the inquiry process where learners are tasked with a problem or issue and, through iteration between discourse and reflection (public and private worlds), construct meaning and confirm understanding. The essence of cognitive presence is the practical inquiry cycle derived from the work of John Dewey. Cognitive presence is operationalized through the Practical Inquiry Model that reflects the phases of the educational process (Garrison & Anderson, 2003). The first phase is the recognition and definition of the problem or issue. The second phase is the exploration of the problem or issue through the gathering of relevant information and perspectives through individual searches and discourse. The third phase is making sense of the existing information with the goal to reach resolution through reflection, sharing and critically analyzing the best ideas. The fourth phase is to test the best solution through application either vicariously or

directly. Inevitably, the application phase is a catalyst to restart the inquiry process again to rethink, refine or construct a better solution.

Purposeful reflection and discussion focused on worthwhile educational goals is the essence of cognitive presence. Without purpose, collaboration and leadership, discourse in a CoI is very likely to be fragmented personal comments. Another key aspect of cognitive presence is the importance of metacognitive awareness. Progressing through the phases of inquiry can be greatly facilitated by learners having an understanding of the expectations and the inquiry cycle. This will help focus activities while ensuring that the inquiry moves to resolution.

An important insight derived from the first studies using the Practical Inquiry Model was the difficulty of moving online discussion through to resolution. The evidence suggests that progression is largely influenced by teaching presence (Garrison & Arbaugh, 2007). Ensuring that cognitive presence includes integration and resolution is dependent upon the design of appropriate tasks, facilitation and direction – the three categories of teaching presence.

Teaching Presence

The role of teaching presence is crucial in developing and sustaining a community of inquiry. The evidence is growing rapidly of the importance of teaching presence "as a significant determinant of student satisfaction, perceived learning, and sense of community" (Garrison & Arbaugh, 2007, p. 163). Like social and cognitive presence, teaching presence is multidimensional and developmental in nature. In many ways it is the integrating force that holds the social and cognitive elements together and ensures a functioning community of learners.

Teaching presence is hypothesized as having three responsibilities – design, facilitation and direct instruction (Anderson, Rourke, Garrison & Archer, 2001). The first aspect of teaching presence is designing the curriculum, tasks and timelines. Design sets the stage and the potential of the learning experience. Design is of particular concern in creating a community of inquiry and collaborative-constructivist learning experiences. In such environments, where learning is not predictable, design and organization are continuing challenges. Designing an online learning experience is a challenging task as it must concurrently consider social and cognitive presence concerns. Care must be taken to plan for the creation of a welcoming climate as well as activities that engage students in collaborative and reflective activities that have clear outcomes.

The second category of teaching presence is facilitating various learning activities. A common and potentially meaningful activity in online learning is the discussion forum. Here the primary responsibility of teaching presence is to monitor and manage discourse to ensure that it is productive and learners stay engaged. Too much or too little teaching presence in the form of facilitation can have adverse effects on keeping the discussion focused and realizing constructive outcomes. Collaborative learning activities such as project work will demand a different level of facilitation. While guidance must be readily available when the group needs it, care must be given to provide students with the necessary control and responsibility.

There are times, however, when a more direct instructional approach is required. This is the third category of teaching presence. There are times in a formal educational context when the disciplinary authority of an experienced teacher is necessary to provide specific ideas, diagnose misconceptions, or summarize the discussion. Other examples are to manage conflict or provide an introductory mini-lecture or lesson. At the same time, however, this proactive intervention is done in an open and collaborative manner with the intent of avoiding frustration in unproductive activities. Direct instruction must not undermine students taking responsibility for constructing meaning and sharing in a community of inquiry.

From a theoretical perspective, there is some question as to whether the teaching presence construct is composed of two or three categories. While there is evidence of three categories (Arbaugh & Hwang, 2006), recent empirical work has created some confusion. One study of higher education students seemed to suggest that students had difficulty distinguishing between facilitation and direct instruction (Shea, Li & Pickett, 2006). Similarly, the initial findings of a group developing a CoI instrument validated the existence of the three presences, but did find that teaching presence may only have two factors (Ice, Arbaugh, Diaz, Garrison, Richardson, Shea, & Swan, 2007). However, they found that design and direct instruction may be viewed by students as similar. While there are reasonable explanations for both these anomalous findings (see Garrison & Arbaugh (2007) for further discus-

sion), considerable research is required before this issue is resolved. Regardless, from a theoretical and practical perspective, there is merit in distinguishing three categories of teaching presence.

CONCLUSION

The increased focus on collaborative-constructivist approaches to learning in higher education has precipitated a growing interest in online learning communities. Community is considered essential to engage learners in collaborative learning activities. Collaborative learning activities are what set online learning apart from traditional distance education. The Community of Inquiry Framework was created to study the dynamics of online learning communities and has been widely adopted. The key to understanding the complex dynamics of a community of inquiry is the composition and interaction of social, cognitive and teaching presence.

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KEY TERMS

Cognitive Presence: A process of practical inquiry distinguished by discourse and reflection for the purpose of constructing meaning and confirming understanding.

Collaborative-Constructivist: Approaches to learning that fuse individual construction of meaning and collaborative validation of understanding.

Community Of Inquiry: A framework that reflects a collaborative-constructivist approach to learning.

Online Learning: Networked synchronous and asynchronous communications that support purposeful learning communities.

Social Presence: The ability to identify with a group, communicate purposefully, and develop interpersonal relationships.

Teaching Presence: The design, facilitation and instruction directed toward creating and sustaining a community of inquiry.