Preface

There have been significant theoretical developments in the field of distance education in the last decades that have provided enhanced understanding of teaching and learning in distance and online learning environments. One of these theories is the Community of Inquiry (CoI) Framework developed by Garrison, Anderson, and Archer (2000), which focuses on higher level learning processes. Since its first appearance, the CoI framework has become a credible and coherent theory with the contributions of many researchers and critical reviews. The CoI theoretical framework represents the process of creating a deep and meaningful learning experience through the development of three interdependent elements – social presence, teaching presence, and cognitive presence.

The CoI theoretical framework provides well-structured guidelines and a set of principles to develop effective learning environments and assure and sustain successful educational experiences. The guiding philosophical premise of the framework is to create a collaborative and constructivist learning community. Through the development and maintenance of mutually interacting and supporting social, teaching, and cognitive presences, the framework aims to reach deep and meaningful learning. Social presence provides the sense of belonging through the development of climate and interpersonal relationships in the community. Cognitive presence is the description of the progression through the phases of practical inquiry to construct and confirm meaning through sustained discourse. Teaching presence provides the design, facilitation, and direction throughout a course of study. It is only when all three elements are developed and balanced in a collaborative learning environment that we can be assured of deep and meaningful learning.

Many research studies have provided evidence of high levels of learning in the context of a community of inquiry. The potential of the CoI theoretical framework has been widely recognized and the principles and strategies have been applied to various learning contexts including K-12, higher education, workplace settings, as well as online and blended learning environments. The CoI theoretical framework has also been investigated in various disciplines and fields (e.g. nursing, divinity, social sciences, adult education).

Recognizing the growing interest in the CoI framework, there have been many publications in prestigious journals, presentations at worldwide conferences, and a special issue of the Internet and Higher Education journal. These developments in the last decade also resulted in a second edition of the “E-learning in the 21st Century: A Framework for Research and Practice.” This book is largely an introductory text and was only able to give an overview of recent CoI research and theoretical implications. As such, there was still a need for a book to collect recent research and provide in-depth theoretical interpretations and developments arising from a range of different contexts. The editors of this book,
Educational Communities of Inquiry: Theoretical Framework, Research and Practice, aim to meet this need by providing an important contribution to the literature on e-learning and representing the first extensive reference book of recent research and practice associated with the CoI theoretical framework.

The target audiences of this book are both researchers and practitioners. Graduate and undergraduate students in the field of educational technology as well as adult and distance educators who are interested in learning about and using the CoI theoretical framework will benefit highly from this book. Researchers in most fields who wish to conduct studies investigating aspects of teaching and learning in online or blended environments will benefit from the insights in this book. In particular, those who wish to further explore and contribute to the CoI theoretical framework will find this book invaluable. The editors hope that this book will also allow researchers to lead them to explore new areas of research. It will also provide practitioners direction in terms of designing and delivering online and blended learning experiences. Faculty who are willing to teach courses using the CoI framework will welcome this extensive resource of research and practice. Finally, practitioners and policy makers (i.e., instructional designers, teachers, professors from K-12 to higher education to corporate institutions) who are interested in applying the principles of the CoI theoretical framework to plan, design, deliver, and evaluate courses or training programs in online or blended learning environments will be attracted to this unique resource.

THE STRUCTURE OF THIS BOOK

The first section provides an extensive exploration of the theoretical foundations of the CoI framework.

The goal of the first chapter is to strengthen and clarify its philosophical and theoretical assumptions and principles. Through an analysis of community and inquiry the unity of shared discourse and personal reflection are explored. The work of John Dewey is central to the epistemological foundation of the CoI framework although the connection and contribution of other educational and learning theorists are identified. The connection and place for concepts such as metacognition, self-regulation, and motivation are also briefly explored.

The philosophical roots of the CoI framework are more deeply explored in the second chapter. This chapter provides a philosophical analysis of communities of inquiry that makes an important connection to previously unexplored fields of study relevant to pedagogy in online learning environments. The chapter looks at important concepts such as the “ideal speech situation” and the role of the facilitator that is crucial to a deep and meaningful community of inquiry. These issues are then explored more deeply in the opportunity for “hybrid discourse” that mixes the literate (text), oral (verbal speech), and visual means of communication. The complexity and dynamic interplay of the constituting elements of systems like communities of inquiry are also analyzed.

The crucial place of metacognitive awareness in a community of inquiry is identified and addressed in depth in the next chapter. Chapter three is an example of an important theoretical exploration associated with the development of the CoI framework. It discusses the value and role of metacognition in a community of inquiry by mapping the origin of the concept and contextualizing it within a collaborative learning environment. Specifically, it defines the construct in terms of knowledge, monitoring, and regulation of cognition and explores its place in the CoI framework. Finally, the practical support of metacognition and how it can be developed is described.
The fourth chapter provides an interesting and valuable historical perspective of communities of inquiry from the perspective of distance education. This is important, as the authors note, because online distance education has become an important strategy for higher education. Moreover, research suggests that online communities create a sense of belonging which leads to satisfaction and persistence. The evolution of distance education and its associated technologies from independent study to collaborative approaches is described. Interaction and the online learning community are explored before describing the Community of Inquiry framework.

The second section of the book is devoted to design and implementation issues of the CoI framework.

The first chapter in this section, chapter five, focuses on the central role of teaching presence for the success of online courses. The chapter begins with a review of the CoI research associated with teaching presence in the context of the other presences. The top two indicators that students perceive to be important are making requirements clear and being responsive. These findings and future research directions are discussed.

Chapter six provides an innovative CoI perspective on blending synchronous and asynchronous online learning. Issues associated with asynchronous online learning are discussed and a blended online learning design approach is explored to mitigate some of the challenges. Like the previous chapter, attention is drawn to the importance of teaching presence. Perceived differences between faculty and students were identified, and design and delivery solutions explored. A summary of effective teaching presence practices is provided.

The relationship between teaching presence and cognitive presence is explored in chapter seven. In particular, the chapter reports on a study that looked at the balance of teaching presence essential to students moving to the integration and resolution phases of cognitive presence in a problem based learning design. Using a rigorous mixed method quasi-experimental research design, the CoI framework was extended to study two levels of explicit scaffolding and its effect on the quantity and quality of cognitive presence. Then came the somewhat surprising finding that too much explicit scaffolding (a form of teaching presence) led to reduced cognitive presence. The temporal development of a CoI was also discussed.

Chapter eight also focuses on the relationship between teaching presence and cognitive presence. Specifically, it looks at ways to promote discussion skills in a blended learning course design using the CoI framework. Based on a review of the concept of coaching, the chapter explores how two types of coaching can improve online discussion and cognitive presence. Indicators of teaching presence were seen to be useful in implementing functionalist coaching and practical suggestions for coaching using the teaching presence categories are provided.

Chapter nine provides a practical discussion of how to nurture cognitive presence and foster critical thinking. The chapter begins with a thorough discussion of each of the four phases of cognitive presence and its development. Strategies and question prompts are provided for the phases of cognitive presence (i.e., Practical Inquiry model). A valuable guideline for identifying and eliciting cognitive presence based on the practical inquiry descriptors and indicators is provided.

Cognitive presence is also the focus of chapter ten. Using the CoI framework, this study explores how teaching and social presence contributes to the development of cognitive presence. The chapter provides an extensive review of critical thinking, cognitive presence, collaborative learning, and technologies that support collaborative learning. The rest of the chapter provides evidenced based strategies to promote cognitive presence in online discussion forums.
Chapter eleven explores question prompts and levels of critical thinking that operationalizes cognitive presence in the CoI theoretical framework. The chapter discusses the importance of question prompts for higher critical thinking and notes that only a small number of studies have explored the role of initial question prompts. Nine types of question prompts were rigorously studied and analyzed. The relationship between type of response and phase of inquiry as well as those that promote the highest levels of critical thinking are identified and recommendations discussed.

In chapter twelve, the CoI framework is used to operationalize the instructional design process and to study blended and online approaches using cooperative and collaborative strategies for group projects. A discussion of the distinction between cooperative and collaborative learning is provided along with a description of the elaborate research design. Differences were found on group project grades (but not individual grades) that used a collaborative compared to a cooperative group strategy with a blended approach. An interesting and insightful discussion of the four treatment effects and each of the CoI presences is provided.

Chapter thirteen explores the development of social, teaching, and cognitive presence in a blended foreign language course. The analysis of asynchronous discussions indicated that students were able to create an environment that encouraged reflection and meaningful interactions in online discussions. However, the study yields different types of social interactions in the blended learning environment than those previously found in exclusively online discussions with a lower presence of cohesive and affective indicators. The discussion of the findings and implications for foreign language blended courses are provided.

Chapter fourteen also focuses on the application of the CoI framework in a foreign language (EFL) context. The study explored the relationships among EFL students’ participation level, satisfaction with online discussions, perceived contributions to the discussion groups, English proficiency, and interactions during the discussions in an community of inquiry context. Overall, the results suggest a positive impact the CoI elements developed in the EFL context on students’ participation and satisfaction level. The authors provide suggestions for the application of the CoI framework to design computer-supported collaborative EFL learning environments.

An invaluable review of research on the CoI framework and student retention as well as a discussion of the CoI framework in relation to the existing retention theories are provided in chapter fifteen. A theoretical link between the CoI framework and retention is proposed through the intermediary of student learning. Emphasizing the overall difficulty of overcoming the influences of external factors on retention, Meyer argues that the principles of “academic integration” and “utility” can be maximized by using the CoI to design courses that require active student learning, consistent and challenging involvement with the content, and efforts to connect what is learned with the student’s current and future professional or practical needs.

The last chapter of the second section, chapter sixteen, focuses on a substantial issue – assessment. The chapter introduces a triad approach to assessment – integration of self-reflection, peer feedback, and teacher assessment practices. Through a research study, the chapter demonstrates how the CoI, combined with the use of collaborative digital technologies such as blogs, wikis, and other social networking applications in higher education, can provide an opportunity to reinforce the principles of good assessment feedback.

The third section includes chapters about administrative issues and organizational support.
The first chapter of the third section, chapter seventeen, describes an institutional pedagogical counseling program-assessment and systematizing initiative through the adaption of the CoI framework. An inquiry through pedagogical-counseling experience-exchange process was set up to analyze, assess, and potentiate ongoing support activities by the staff members of the Center for Research and Development in Education (CIFE) in counseling projects of undergraduate and postgraduate programs. The CoI framework adapted to conceptualize CIFE staff’s review, and it was found that the CoI framework was crucial to framing the pedagogical counseling experiences and shaping the role of the various players within the overall exercise; in addition, it provided a route map for the future of the pedagogical counseling program.

Chapter eighteen explores how the CoI framework can be used to design and deliver a ten week Hybrid Course Development Institute (HCDI) for faculty members from a variety of disciplines. The faculty experienced a blended format and developed courses based on the three elements of the CoI framework: cognitive presence, teaching presence, and social presence. The data from both faculty and the students in blended learning courses developed indicate the challenge of developing a well-balanced social presence. The authors argue that faculty members come to cognitive presence and teaching presence a bit more naturally, but social presence demands careful and sustained consideration when designing blended courses and curricula. The suggestions for ways to foster social presence in and beyond a blended learning institute for faculty members are provided.

In chapter nineteen, the focus is on teaching presence from an institutional perspective. The chapter discusses the impact of philosophical and pragmatic changes on teaching practice and the role of teacher. The author suggests a principled approach to teaching for faculty to stay on track of teaching requirements, regardless of delivery mode. The principles are to support new teaching practices but, if adopted, will also change the way the role of faculty is configured and executed in the higher education context.

Last chapter of the third section, chapter twenty, presents the results of research concerning the ramifications of teaching requirements as university education shifts into the digital era from the perspective of teaching center managers and IT specialists. Using the CoI framework as a theoretical lens, it was found that even though all three elements of inquiry were found important by participants, the categories of social presence such as group cohesion were indicated as more crucial and should be given more weight toward the pedagogical requirements for online/blended teaching and learning. The authors suggest that group cohesion could be facilitated and reinforced by appropriate role models played by all participants in any online intellectual activity, especially teaching and learning in a university context.

The last section of the book presents chapters that discuss emerging research and practice issues.

Chapter twenty-one provides a creative and innovative look at an analogous area of knowledge workers. The chapter draws parallels to each of the CoI presences in terms of knowledge workers and communities of practice. The author begins by emphasizing the hidden wholeness of a CoI and argues that this is not that different from what a knowledge worker might experience in the workplace. A major part of the chapter explores the tenets of knowledge management and its impact on academic institutions. The point being that we can generalize the CoI framework to the world of work and use its presences to help define processes inherent in knowledge work. The author notes that learning management systems that we have become so familiar with has the potential to provide educators with a practical appreciation of knowledge management systems. The chapter concludes with a call for more research that explores the utility and connections of the CoI framework in a variety of contexts and cultural settings.
Chapter twenty-two provides an interesting discussion on emerging technologies and how these technologies may influence the CoI framework. The authors introduce the innovations in digital publishing, multi-screen and applications, multiuser virtual environments, adaptive learning environments and analytics, and explore their potential impacts on the CoI framework to evolve and account for new types of learner and instructor interactions. The importance of sound pedagogical principals of the CoI framework in order to adapt the emerging interaction styles as a result of these affordances is emphasized.

The CoI framework in a multicultural environment is explored in chapter twenty-three. The chapter reports a two phased study. Phase one comprised creating intercultural competency indicators to test how they developed and expanded existing teaching and social presence indicators; and phase two involved augmenting the 34 item CoI survey instrument. The results reveal that instructor intercultural competence in the form of efficacious facilitation and open communication strategies can compensate for the lack of an instructional design that is culturally oriented and inclusive. A revised version of the CoI survey for online intercultural teaching and learning environment is also provided in the chapter.

The last two chapters of the final section introduce design-based research methodology for CoI research. Chapter twenty-four demonstrates an ongoing design-based research being conducted in the fully online Master of Arts in Teacher Leadership program. After an initial Quality Matters review and redesign, semester-to-semester implementation issues identified by the CoI survey form the basis for ongoing course improvements. The chapter reports the efficacy of using this design-based, collaborative approach to building communities of inquiry in online courses in which learning outcomes significantly improved. It is indicated that the design based research perspective provides methodological flexibility while focusing on both theoretical and pragmatic course improvement goals.

The final chapter provides a combination of an emerging research method and context. The chapter describes the conceptualization and implementation of an international cyber-learning environment as a community of inquiry through application of design based research methodology. The research presented in the chapter involves the development of the cyber-learning environment to foster engagement among faculty, staff, and students of 13 medical schools from Sub-Saharan Africa and their 50-plus partners around the world. The chapter addresses key environmental constraints and how these constraints guided operational decisions during implementation and discusses challenges and solutions as well as lessons learned.

CONCLUSION

*Educational Communities of Inquiry: Theoretical Framework, Research, and Practice* offers readers a valuable resource by providing a comprehensive overview of trends and issues related to the research and practice of the CoI theoretical framework. The first section of the book explains the philosophical insights and theoretical underpinnings of the CoI framework and clarifies some of the issues with regard to its role on learning and place in e-learning world. The second section of the book informs both researchers and practitioners about the strategies and tools to develop an effective community of inquiry which in turn impact learning and retention. The third section represents the innovative uses of the CoI framework to approach administrative issues and to support organizational development. The final section gives the readers an opportunity to envision the future issues and trends of the CoI research and practice.
The editors believe, with the diverse and comprehensive coverage of educational communities of inquiry, this book will contribute to a better understanding of the concepts, research, and practice of the CoI framework. All the contributing chapters in this book are instrumental in expanding the body of knowledge in the e-learning field generally as well as the CoI framework specifically. They hope that this publication will be a good reference resource for all stakeholders who seek better ways to teach and learn in an e-learning environment through the development of effective communities of inquiry.

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