Chapter 10
Online Learning in K–College Classrooms: Students and Teachers Establish Social, Cognitive, and Teaching Presences in Digital Spaces

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ABSTRACT
The rapid expansion of technology within educational contexts has created a situation where teachers are increasingly asked to find ways to use technology to allow learners to interact authentically with the content and other users. This often encompasses some form of online instruction; yet not all teachers feel prepared to engage in online teaching. To address this context, this chapter identifies various elements of design that have proven effective within online instruction. To expand upon these elements, the Community of Inquiry (CoI) framework is introduced. The chapter further describes how the CoI’s social, cognitive, and teaching presences can be used to create an environment conducive to learners’ active engagement with content and each other. The chapter concludes with descriptions of specific activities integrating the presences that can be used to facilitate learning in online environments as well as implications for future research in this area.

INTRODUCTION
Recent advances in technology have had a tremendous impact on the methods and means people use to communicate, learn, and work (Allen & Seaman, 2013). The changes are especially prevalent within educational contexts as online instruction has become an increasingly popular means to address the “anytime, anywhere” expectations of learners. Opportunities to participate in online education at the K-12 and post-secondary levels have increased rapidly, as much as 20%
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annually according to some estimates (Marsh, Carr-Chellman, & Sockman, 2009). In 2012, only about 13.5% of all institutions offered no online course options (Allen & Seaman, 2013). Reinforcing this growth, in 2008, about 2% of the school-age population, or slightly more than one million students, participated in an online course (Picciano & Seaman, 2009). Recently, however, this number has grown to more than 1.8 million students and 55% of school districts report students enrolled in online classes (Queen, Lewis, & Coopersmith, 2011). Examining online learning in colleges and universities reveals a similar trend. Student enrollment in online classes has grown from 4.5 million to more than 6.7 million students from 2008 to 2012 (Allen & Seaman, 2010; Allen & Seaman, 2013). Online education has arrived and is quickly expanding across all levels of schooling.

There are multiple reasons for the growth of online learning. From the perspective of the participant, there is the “potential for ... more flexible access to content and instruction at any time, from any place” (Means, Toyama, Murphy, & Baki, 2013, pg. 3). In essence, students can control when and how they engage and participate. This convenience and timing of participation creates a more student centered learning environment, supporting critical thinking and fostering understanding. Those delivering online programs, on the other hand, cite opportunities to provide instruction to students from diverse geographic areas in a cost efficient manner (Means et al., 2013). For K-12 institutions, this might mean providing coursework that may not be available to students otherwise. In rural communities, where geography can sometimes pose barriers, AP courses can be delivered electronically. Similarly, in higher education, non-traditional students who may have employment or family responsibilities that make it impossible for them to learn during the day, can access an online course that gives them the opportunity to interact and collaborate with peers without constraints of face-to-face interaction that require them to be at the same place at the same time.

As schools and universities increase the number of opportunities for students to participate in online instruction, it is important to reflect on the quality of online courses to maximize benefits on student outcomes. It is especially salient that we consider the preparation of those teaching online courses. It is likely that many teachers will be required to teach online or hybrid courses at some point, so it is imperative they are prepared to provide effective instruction specific to these environments. Underscoring this need, Kennedy and Archambault (2012) found only 1% of teacher education programs provide online teaching experiences for prospective teachers. This impacts K-12 teachers who lack an understanding of the complex relationships between content, pedagogical, and technological knowledge to effectively teach online (Archambault, 2011).

As a result of the current educational context, we have composed a chapter that has three objectives. First, we provide a broad overview of what constitutes online education, including a description of important design elements. Second, we expand on the discussion of one specific element, providing opportunities for interaction and collaboration, to emphasize powerful online instruction should seek to emulate the various interactions that take place within the classroom setting in a digital environment. Our explanation is grounded in the Community of Inquiry framework (CoI) (Garrison, Anderson, & Archer, 2000) as we explain how social, cognitive and teaching presences can facilitate these interactions and improve learning in online environments. Finally, we conclude with implications for teaching and learning as we infuse the three presences addressed in the CoI framework within online course delivery.