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Instructors as Facilitators of Learner–Learner Interaction in Third-Generation Learning Environments

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My commentary proposes an extension of Kraiger's (2008) ideas. In my opinion, it appears that in promoting the important role of learner–learner interaction in third-generation instruction, he may have understated the importance of the role of instructors in Web-based instruction (WBI). Considering the degree of focus on the instructor in the training literature noted by Kraiger, such an orientation certainly is understandable. However, given the concerns over self-directed learning he also noted, further elaboration on the role of the instructor in WBI seems warranted. Therefore, I wish to expand on his discussion by noting results of recent research on these types of interactions and presenting elements of an emerging framework of WBI to explain these results. In doing so, I also hope to stimulate dialogue between organizational training and development researchers and management education researchers interested in WBI.

Participant Interaction in Web-Based Management Education

Recent research suggests the importance of participant interaction as a predictor of learning outcomes in management education (Arbaugh, 2005; Eom, Wen, & Ashill, 2006). Studies that have examined learner–learner interaction in online management education generally have found that it positively predicts course learning outcomes (Arbaugh & Rau, 2007; Williams, Duray, & Reddy, 2006). However, whether learner–learner interaction is a stronger predictor than learner–instructor interaction in management education is unclear because studies that have examined both have produced mixed results. Some studies have found that learner–learner interaction is the stronger predictor (Arbaugh, 2002; Peltier, Drago, & Schibrowsky, 2003), although others have found that learner–instructor interaction is the stronger predictor (Arbaugh & Benbunan-Fich, 2007; Arbaugh & Rau, 2007). Regardless of which type of interaction is the strongest predictor, it is clear that instructors play at least a structural role through the manner in which they design and organize the course, and their role as content expert should not be underestimated (Brower, 2003; Sarker & Nicholson, 2005). Therefore, emerging findings in the area of participant interaction strongly suggest the importance of instructors in online management education.

Although an appropriate area of emphasis for organizational training, I fear that placing nearly exclusive focus on learner–learner interaction could marginalize the role that instructors can play in its generation (Thompson, 2007). The next section of this

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commentary provides some conceptual support for this concern by discussing an instructor-related element of an emerging theory of WBI from the education literature.

Teaching Presence in the Community of Inquiry Framework

Kraiger cited Garrison's (1993) early work on the role of participant interactions for creating effective distance learning environments. I would like to build on his discussion by incorporating Garrison's subsequent work into this commentary. Garrison, Anderson, and Archer (2000) developed the community of inquiry (CoI) framework to investigate how features of written language used in computer conferencing activities promote critical/higher order thinking. They contend that higher order learning experiences are best conducted as a CoI composed of teachers and learners, requiring both the engagement of "real" persons and the demonstration of critical thinking to be successful. Their framework posits that effective online learning is a function of the interaction of three elements: teaching presence, social presence, and cognitive presence.

In the CoI framework, social presence is defined as the ability of learners to project themselves socially and emotionally, thereby being perceived as "real people" in mediated communication (Gunawardena & Zittle, 1997), and cognitive presence is described as the extent to which learners are able to construct and confirm meaning through sustained reflection and discourse (Garrison, Anderson, & Archer, 2001). Garrison et al. (2000) contend that although interactions between participants are necessary in virtual learning environments, interactions by themselves are not sufficient to ensure effective online learning. They argued that although social presence is foundational for creating an effective Web-based learning environment, teaching presence was necessary for moving learners from social interactions toward higher order learning or cognitive presence (Garrison & Cleveland-Innes, 2005).They describe teaching presence as the design, facilitation, and direction of cognitive social processes for the purpose of realizing personally meaningful and educationally worthwhile learning outcomes. Anderson, Rourke, Garrison, and Archer (2001) conceptualized teaching presence as having three components: (a) instructional design and organization, (b) facilitating discourse, and (c) direct instruction. I will discuss each of these components and how they emphasize the instructor's role in supporting participant interaction in WBI.

Course design and organization. Anderson et al. (2001) describe the design and organization aspect of teaching presence as the planning and design of the structure, process, interaction, and evaluation aspects of the online course. Some of the activities comprising this category of teaching presence include recreating PowerPoint presentations and lecture notes onto the course site, developing audio/video minilectures, providing personal insights into the course material, creating a desirable mix of and a schedule for individual and group activities, and providing guidelines on how to use the medium effectively. These are particularly important activities because clear and consistent course structure supporting engaged participants and dynamic discussions have been found to be the most consistent predictors of successful online courses (Swan, 2003).

Facilitating discourse. Anderson et al. (2001) conceptualized facilitating discourse as the means by which students are engaged in interacting about and building upon the information provided in the course instructional materials. This component of teaching presence is consistent with findings supporting the importance of participant interaction in online learning effectiveness in general and in management education in particular (Arbaugh, 2005). This role includes sharing meaning, identifying areas of agreement and disagreement, and seeking to reach consensus and understanding. Therefore, in the context of online management education, facilitating discourse requires the instructor to review

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and comment upon student comments; raise questions and make observations to move discussions in a desired direction, keeping discussion moving efficiently; draw out inactive students; and limit the activity of dominating posters when they become detrimental to the learning of the group (Brower, 2003; Coppola, Hiltz, & Rotter, 2002). In light of Kraiger's concerns about the limitations of self-directed learning, such a role for the instructor seems particularly important in a WBI environment.

Direct instruction. Concerns regarding the effectiveness of self-directed learning also appear to reinforce the need for a role of the instructor as content expert. Anderson et al. (2001) contextualized direct instruction as the instructor's provision of intellectual and scholarly leadership in part through the sharing of their subject matter knowledge with the students. They also contend that a subject matter expert and not merely a facilitator must play this role to diagnose comments for accurate understanding, inject sources of information, direct discussions in useful directions, and scaffold learner knowledge to raise it to a new level.

In addition to the sharing of knowledge by a content expert, direct instruction is concerned with indicators that assess the discourse and the efficacy of the educational process. Instructor responsibilities are to facilitate reflection and discourse by presenting content using various means of assessment and feedback. Explanatory feedback is crucial. Instructors must have both content and pedagogical expertise to make links among contributed ideas; diagnose misperceptions; and inject knowledge from textbooks, articles, and Web-based materials.

The simultaneous roles of discussion facilitator and content expert within teaching presence go beyond early contentions that online instructors needed merely to transition from a role of knowledge disseminator to interaction facilitator. Teaching presence contends that for online learning to be effective in online management education, instructors must play both roles (Arbaugh & Hwang, 2006). Also, teaching presence emphasis on design and organization should positively impact student satisfaction with the Internet as a delivery medium. If there is no set of activities, no timeline, no protocol, no format for course materials, and no evaluation criteria, chaos ensues in the WBI environment (Hiltz & Wellman, 1997). Design and organization therefore provides the context from which discourse and direct instruction derive meaning.

Conclusions

I believe that elements from each of the generational instructional models that Kraiger described will be needed as organizations develop their strategies for training and development; the challenge will be to determine the contextual factors that determine the optimal mix of these elements for each organization's needs. Management education researchers have developed some preliminary contextual models describing the application of WBI (Leidner & Jarvenpaa, 1995; Rungtusanatham, Ellram, Siferd, & Salik, 2004), and some of my recent research suggests that elements of both objectivist and constructivist approaches need to be used together for effective graduate-level WBI (Arbaugh & Benbunan-Fich, 2006, 2007). The need to integrate these approaches suggests that instructors will continue to play an important role in third-generation systems.

Unfortunately, the role of instructors in distance education environments has long been marginalized (Dillon & Walsh, 1992). It is my hope that this commentary will help prevent that from happening in the context of third-generation instruction. Rather than inhibiting learner–learner interaction, well-trained instructors can lead participants into more positive learning outcomes. I also hope that the evidence for this in the on line management education literature will encourage organizational training researchers to consider the roles of instructors in WBI and encourage further collaboration between these research communities.

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