

Communities of Practice

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INTRODUCTION

Basic social-learning theory presupposes that students and instructors function within community; they share common context, goals, and expectations and, thus, actively work to help one another learn. Instructional environments that reflect this understanding that all participants contribute to the learning process exemplify what is generally called a “community of practice” or a “community of learners” (Ormrod, 2004). Communities of practice involve situations in which teachers structure realistic problems or tasks and then facilitate learners to activate previous understandings, to interact collegially with others, and to apply combined knowledge to work towards a process-based solution. It is important to recognize that communities of practice can extend beyond traditional educational settings (such as school) into family dynamics, corporations, or any other social context.

BACKGROUND

Research has focused on the changing roles of learner and instructors in technology-assisted educational settings. Kettner-Polley (1998) presented an autobiographical case study describing the metamorphosis that occurs when a traditional educator fully adopts a technology-mediated teaching style; “...this is only one person’s story. On another level, it is a sign of the times. Traditional academia is rapidly falling apart, and it is the quiet transformation of traditional (teachers) into virtual (teachers) that tells the true story behind this revolution” (¶ 1). In describing the changing role of the instructor, Kettner-Polley’s report also detailed the common principles that guide twenty-first century learning: community, accountability, and flexibility.

Smith, Ferguson, and Caris (2001) interviewed twenty-one educators familiar with both traditional and technology-assisted teaching strategies. This study indicated that, not only were computer-mediated ac-

tivities at least as interpersonal as face-to-face classes, one-to-one relationships could actually be enhanced by the increased use of technology-based learning strategies. Additionally, these researchers concluded that teaching and learning that integrates technology elicits higher-order thinking and increased instructor-student equality.

Fowler (2005) proposed that technology-enhanced coursework may actually prove to be more academically challenging and pedagogically sound than traditional face-to-face activities. “Despite the fact that online learning is a pretty well-established learning modality, there are those who continue to discuss and debate whether online is ‘equivalent’ to onsite.... In fact, a recent experience of simultaneously teaching online and onsite has me asking quite the opposite question: Are onsite courses as effective as online?” (p. 8).

Beam and Zamora (2002) recommended that, before educators attempt to teach with technology, they ought to be well-versed in the experience of being online learners, themselves. This case study documented elements perceived to connote successful technology-based teaching and learning as an intentionally designed reflective and supportive learning environment; flexible course design; real-world opportunities for application of skills being learned; collaboration with peers; and asynchronicity.

Modern students generally express a preference for collaborative and authentic learning activities over lectures, projects, and discussions (Stein, 1998). Kish (2004) utilized teacher vignettes as part of a technology-assisted course and discerned that interactive teaching practices increased academic achievement and higher-order thinking skills. Other authentic learning experiences, including online case-based approaches, have been demonstrated to improve students’ reflective and critical-thinking abilities (Kim, Hannafin, & Kim, 2004). Alomyan and Au (2004) concluded that the nature of teaching and learning with technology, particularly the use of collaboration and hypermedia, actually reduces academic performance differences between students with differing cognitive styles

Much of the educational design that integrates technology incorporates ideas of “communities of practice” suggested by Lave and Wenger (1991). This model of situated learning defines community as a set of relationships rather than as a fixed social or temporal construct (Smith, 2005). Duncan and Leander (n.d.) maintain that learning by means of intentionally-structured experiences with technology exemplifies communities of practice; “...it is productive for the study of Internet community and learning possibilities to consider the particular kinds of social-material spaces that the Internet constructs, including the increasingly fuzzy conceptions of public and private space” (¶ 3). Electronic mail (e-mail), use of the World Wide Web, and Internet course delivery have been found to be particularly effective uses of situated learning that foster communities of practice, and positively affect learners’ affect and achievement (Bhalla, Chu, Currier, Curtis, Dehash, Eick, et al., 1996; Veal, Brantley, & Zulli, 2004).

Owen (n.d.) explained professional development in terms of induction to a community of practice and detailed situated learning as it is applied to teacher education. Because they utilize flexible distance education techniques, courses that integrate technology assists support professional development (Johnstone, 2002), particularly when they are “...based on practitioners’ reflection of their work and collaborations with their colleagues” (Owen, n.d., ¶ 30). Crawford (2002) proposed an educational model in which technology-integration strategies (including participation in online courses) was deemed to be essential in producing new understandings. Specifically, Crawford rates learner-centered (rather than teacher-centered) instruction, Internet access and integration, professional modeling opportunities, and interactive or collaborative activities as those elements most effective for promoting engaged learning.

USA Today reported that schools tend to integrate technology less frequently and effectively than does much of society in general (Feller, 2005). Several studies have reasoned that this is due to the fact that technology is not appropriately integrated within educational programs (Goetze & Stansberry, 2003; Sahin, 2003; Wepner, Tao, & Ziomek, 2003). Researchers advocate constructivist practices, a full integration of technology that takes the sociocultural context of teaching into account, when designing instruction (Bhalla, et al,

1996; Crawford, 2002; Duncan & Leander, n.d.; Polloff & Pratt, 2003; Slowinsky, Anderson, & Reinhard, 2001; Walker, 2001). Teachers, preservice and in-service, should utilize technology to begin to structure learning activities within communities of practice.

Lara and Malveaux (2002) describe an educational program redesigned around the theme of teaching and learning with technology; learning communities, collaborative learning, and hybrid courses are foundational to it. The design of whole courses or specific activities that integrate technology with more traditional teaching strategies can afford educators the flexibility to incorporate modeled behavior, collaboration, technology skills, student-centered learning design, and additional time into their courses (Polloff & Pratt, 2003). A study by Vonderwell and Turner (2005) indicated that educators who effectively utilize technology as a tool for situated learning take student expectations and motivations into consideration, redefine student and instructor roles, and reconstruct traditional learning activities and available instructor support. “Students must be prepared for their roles as active learners. Learner autonomy, as well as collaborative strategies, need to be negotiated for the effectiveness of learning” (Vonderwell & Turner, 2005, p.82).

Walker (2001) echoed these ideas in terms of a situated learning environment proposed for teachers’ professional development. Educators were motivated to participate in online courses/workshops or to use technology tools, if they were provided with continual access to instructional technology, could model their technology use on that of knowledgeable peers, and were aware of the technology goals of their districts or schools (Johnstone, 2002). In short, learners embrace technology-mediated instructional practices if they can identify and relate to the communities of practice in which to do so.

COMMUNITIES OF PRACTICE APPLIED

Learning environments considered as exemplifying communities of practice tend to share certain traits (Brown & Campione, 1994; Ormrod, 2005; Rogoff & Lave, 1984; Rogoff, 1994; Tam, 2000), and to make use of particular interactive instructional strategies (Brown & Campione, 1994; Conway, 1997; Tam, 2000). This is particularly true of technology-mediated teaching and learning situations.

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