

Chapter 3

Emergent Technologies and Social Connectedness in Learning

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ABSTRACT

The judicious embedment of technologies in educational contexts can foster learning environments that encourage thoughtful reflections and support deeper learning to occur. Emergent technologies has the capacity to foster effective online learning environments where social processes of learning involving collaboration can be facilitated. Social construction of knowledge facilitated by virtual collaborative platforms can generate a community of learners where the more knowledgeable members share their expertise with their peers. In this chapter, the authors explore the affordances of emergent technologies such as asynchronous discussion forums, synchronous computer mediated communications and 3-D virtual realities in educational contexts. Such technologies can be harnessed to support the paradigmatic shift in instruction to foster more socially-mediated collaborative learning environments.

INTRODUCTION

The recent advances in the domain of communication technologies have afforded a growing number of cutting-edge applications that educators can leverage upon to build multimodal classroom

ecologies that are socially oriented in nature (Chen et al., 2005). Embedding socially-mediated learning structures within a classroom community enables learners to construct knowledge through interpersonal interactions and collaborative communications (Slagter van Tryon & Bishop, 2006). The collective knowledge capital built by the community of learning serves as the shared

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context for the intellectual pursuits and academic excellence of its members. Effective learning can be accomplished when it involves interactions with peer learners in the creation of knowledge discourses based upon common epistemic goals (Zhu & Baylen, 2005). The judicious embedment of technologies in educational contexts can foster learning environments that encourage thoughtful cogitations, allowing deeper learning to occur (Maushak & Ou, 2007). And these reflections should not only be limited to discussions on subject content in academic areas but also cover socially related issues for learning to be truly experienced in a holistic manner (Dede, 1996). Research shows that technology has the capacity to foster effective online learning environments where social processes of learning involving collaboration can be facilitated (Russo & Benson, 2005; Ouzts, 2006). However, media alone doesn't influence successful online collaborations - the instructor is the key determinant to motivating collaborations.

Social constructivism as advocated by the Russian psychologist Lev Vygotsky posits that new knowledge is generated when there are social interactions within a community of students where the more knowledgeable members share their expertise with their peers. These socialization processes used in social constructivism embody reciprocal interactions creating a shared construction of meaning making by the members of an educational community (Sivan, 1986). The sharing of ideas and perspectives encourages deeper thinking and learning to be accomplished. Vygotsky called this approach to knowledge attainment as the "Zone of Proximal Development." In his own words, Zone of Proximal Development (ZPD) can be defined as "the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers" (p. 86).

Wenger (1998) defines a learning community of practice as one that includes joint enterprise, mu-

tual engagement, and shared repertoire. Members who mutually share these three attributes develop unique ways of talking about meaning, practice, community, and identity of the knowledge valued amongst the group members. Wenger further asserts that our existence as social beings is central to the ways we learn, that knowledge gathering is our ability to experience the world and engagement with the world in meaningful ways is the product of learning. Information stored in explicit ways is only a small part of knowing, and knowing involves primarily active participation in social communities and internalization of knowledge. Wenger feels that traditional formats of schooling, in that sense, seem limited in providing the necessary access to conditions and tools that enhance students' participation within social structures of learning and open up their thinking horizons.

Technology has the capacity to extend learning beyond classroom boundaries and create electronic educational spaces that connect students in a network of applied learning. Harnessing the participative nature of technology-supported interactions situates learning in communities of practice sharing a repertoire of knowledge resources.

ASYNCHRONOUS DISCUSSION FORUMS

The integration of asynchronous discussion forums in education has the potential to cover most of the communication tasks between students and teachers: debate about controversial topics, brainstorming, questioning, homework submission queries, news dissemination, etc (Pon-nusawmy, & Santally, 2008). Moreover, learners can also use forum discussion space as an online socializing zone. Discussion forums are good for extended discussions and wide information dissemination but require motivation or structure. Discussion forums create a virtual environment similar to face-to-face classroom environments where knowledge could be critically constructed,

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