Chapter 53
Virtual Collaboration

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ABSTRACT

A key construct in e-learning involves virtual collaborations through computer-mediated communications tools. These collaborations may be synchronous (real-time) and asynchronous (non-real-time). Learners work together to learn; conceptualize ideas and designs; solve problems; co-create learning and presentations; develop plans, designs, and models; simulate role-plays in various contexts; develop and maintain professional relationships, and coordinate their actions in response to particular situations and contingencies. A range of technological tools are used to promote rich virtual collaborations: knowledge structures and digital repositories, learning / course management systems (L/CMSes), web logs, wikis, immersive synthetic worlds, web conferencing software, mobile devices, live video link-ups, collaboratories, web laboratories, mixed-reality collaborative spaces, physical-digital tabletops, and electronic mail and electronic mailing lists. This chapter highlights the various types of virtual collaborations used in e-learning in higher education.

INTRODUCTION

Virtual collaborations, mediated communications and interactions through computer-mediated communications (CMC), have become a mainstay of e-learning for a number of reasons. First is that few human endeavors happen in a vacuum (Johnson & Hyde, 2003; Fischer, 2004), and it is difficult to find various types of diversified expertise in one locale. In remote teaming, there is strength and diversity of ideas and practices. Second, today's generation of learners need to learn the virtual teaming skills that will enable them to work on both local and global virtual teams. They will need to be able to communicate with clarity with colleagues from different fields (on cross-functional teams) because of the growing interdisciplinary nature of most careers. They must become familiar with the

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computer supported collaborative work (CSCW) strategies and technologies. They must be able to build digital assets for their electronic portfolios that will represent them into their professional lives. Third, virtual collaborations enrich the electronic learning. They add new perspectives to a learning experience. They motivate learners to continue with their studies. Virtual collaborations and teams may connect "apprentice" learners with professional practitioners in the field (Kilner & Hoadley, 2005, p. 272; Rohde, Klamma, & Wulf, 2005), and these may be the first steps of their immersions into authentic and applied learning in communities of practice. Fourth, learners today need to collaborate with others to gain access to knowledge as a strategic resource, to lead to improved performances in workplaces (Wan, Fang, & Neufeld, 2008), which have a deep and vested interest in surfacing and protecting knowledge for organizational advantages, decision-making, and survival (Hoffman, Ziebell, Flore, & Becerra-Fernandez, 2008). Virtual communities are critical for learning organizations (Smits & de Moor, 2004). Organizations need to efficiently use information:

> Efficiency is enhanced through common knowledge such as organizational culture and language, the frequency of routines and patterned activity, and organizational structure. Second, scope of knowledge integration refers to the different types of specialized knowledge being integrated – the more complex and wide scope, the greater difficulty for competitors to replicate. Third, the flexibility of integration reflects the extent to which an organization can renew its competitive advantage through innovation and the development of new capabilities. This is achieved by accessing additional external knowledge as well as reconfiguring existing knowledge into new capabilities. (Hustad, 2007, pp. 189 – 190)

In light of this critical competitive advantage of virtual collaboration, this chapter offers a review of the research related to virtual work. This chapter offers an overview of the technologies related to virtual collaboration; it provides some examples of virtual collaborations among learners in higher education, and some insights on necessary research into the future.

Literature Review

"Virtual collaboration" refers to shared work conducted through computer-mediated communications technologies. These involve knowledge spaces and digital repositories, learning / course management systems (L/CMSes), web logs, wikis, immersive synthetic worlds, web conferencing software, mobile devices, live video link-ups, collaboratories, web laboratories, mixed-reality collaborative spaces, physical-digital tabletops, and electronic mail and electronic mailing lists.

VIRTUAL COMMUNITIES

The research literature identifies four types of virtual communities: communities of interest, communities of practice, communities of purpose, and communities of passion. These are listed in order of lower commitment to the highest commitment of the participants. The authors define these labels as non-mutually exclusive and suggest that these may be various phases of a community as it evolves over time. The key differentiators include "the tightness of focus and the subject of the focus" (a set of interests or of practices). The authors explain communities of interest as those with a general diffuse set of shared interests; communities of practice as those with a tight focus on common activities or practices; communities of purpose as those with a common interest (albeit with a range of different backgrounds), and communities of passion with a tight focus on a shared interest by a small group of members (Muller, Carotenuto, Fontaine, Friedman, Newberg, Simpson, Slusher, & Stevenson, 1999, pp. 272 – 273), reminiscent of the concept of a "hot group" (Lipman-Blumen & Leavitt, 1999).