Chapter 26
Student Perceptions and Pedagogical Applications of E-Learning Tools in Online Course

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ABSTRACT

This study explores student views of various E-Learning tools as teaching and learning media in an online course for pre-service and in-service teachers. This chapter also examines the pedagogical applications of E-Learning tools in an online course. The capabilities of a system that allows meaningful interaction, reflection, personal identification, and a sense of community play a key role in the degree of social presence. This study highlights some key findings regarding the efficacy of E-Learning tools from student perspectives and make recommendations for future pedagogical practice.

INTRODUCTION

The utilization of both synchronous and asynchronous communication systems has been a common practice in online instruction. While the majority of distance education is conducted over asynchronous communication mode, the introduction of E-Learning 2.0 tools such as Weblog, podcast, wiki have opened a new door for more learner-centered and interactive instruction. The introduction of E-Learning tools has enabled learners to take more control of their learning. E-Learning 2.0 tools are characterized as tag-based, participatory, playful, social networking, and collaborative editing through tools such as blogs, wikis, RSS, podcasting, flickr, del.icio.us, and wikipedia (O'Reilly, 2005). As these tools are being utilized in classroom or online learning environments, educators are also seeking research-based evidence to demonstrate the effectiveness of E-Learning tools. They are especially interested to know what are the student views on the effectiveness of these tools for online learning? In what ways can the new E-Learning technologies be effective pedagogical tools for online instruction? The purposes of this chapter are twofold: compare indicators of social presence with various E-Learning tools and examine the changes in degrees of social presence during the course

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of an online class. Blog, podcast, Breeze, and Blackboard Discussion Board are the four tools chosen for comparisons from an online graduate course in a teacher education program.

LITERATURE REVIEW

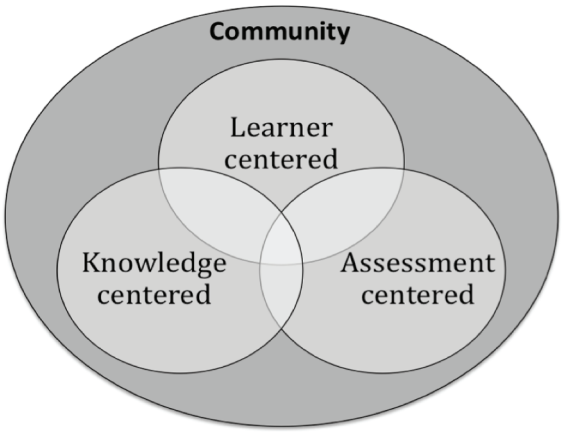
Many models have been proposed to explain frameworks and important components of learning environments. A review of these models will provide a better understanding of how to achieve effective online learning.

Bransford's Model of Learning Environment

Bransford, Brown, Cocking, Donova, and Pellegrino (1999) proposed a model for designing effective learning environments. The learning environment should be learner-centered, knowledge-centered, assessment-centered, and community-centered as shown in figure 1. An effective learning environment must be learner-centered so that the knowledge, skills, attitudes, and beliefs of the students are taken into consideration by the instructors. Learners often use their current knowledge to construct new knowledge. In a learner-centered environment, instructors would attempt to understand what students think, discuss their misconceptions, and integrate instructional strategies that can help learners to acquire new knowledge. Bransford et al. (1999) stated "Overall, learner-centered environments include teachers who are aware that learners construct their own meanings, beginning with the beliefs, understanding, and cultural practices they bring to the classroom" (p. 124). The teacher is the bridge that helps learners build new understandings.

An effective learning environment is knowledge-centered. It is not sufficient to only teach thinking skills and problem-solving skills. These abilities require well-organized knowledge that can be retrieved for the appropriate context. A

Figure 1. Perspectives on learning environments (Adapted from Bransford et al., 1999, p.122)



knowledge-centered learning environment focuses on curriculum design in which students are expected to achieve desired learning outcomes. The curriculum should "help students develop interconnected pathways within a discipline so that they learn their way around in it and not lose sight of where they are" (Bransford et al, 1999, p. 141).

Good learning environments should also be assessment-centered so that students can have many opportunities to receive feedback for improvement. Assessment must reflect the learning goals. Assessment can not only help the students to improve their learning but also the instructors to revise their instructional approach.

Finally, effective learning environments should be community-centered, which share norms and value high standard learning. The norms include ways for learners to interact, receive feedback, and learn.

These guidelines provide a clear pedagogical framework for designing effective online learning environments. These principles are well-supported in the literature. However, for higher education distance learning, the role of the instructor is not clearly defined in this model. In addition, the attributes of technology are missing. The community of inquiry model by Garrison, Anderson, and