Strategies for Effective Use of Technology in Face-to-Face and Hybrid University Level Courses to Improve Student Learning

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ABSTRACT

The purpose of this paper is to (1) briefly discuss the definitions of face-to-face learning, hybrid learning, and related terms concerning the continuum of technology-based learning methods as proposed by Bates (2001) and Bates and Poole (2003); (2) introduce effective uses of technology in face-to-face and hybrid university level courses; and (3) discuss justifications based in research literature for the use of technology to enhance student learning. Technological recommendations include use of multimedia technologies; interactive white boards; and course management systems. This review of literature discusses both theoretical and research based articles and includes empirical studies showing the relationship between effective use of technology and student. The main focus of this paper is to introduce strategies for effective use of technology in both face-to-face and hybrid-style university level courses. This paper is intended for higher-education instructors in both face-to-face and hybrid-style instructional contexts.

Keywords: Effective Teaching/Learning, Face-To-Face Teaching, Hybrid/Blended Learning, Teaching Strategies/Methods, Technology

1. INTRODUCTION

...appropriate use of technologies can make learning more interesting and enriching for students....learning is an individual process and that collaborative and cooperative learning environments are important means of constructing knowledge. (Khine & Lourdusamy, 2003, p. 671) 

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In this digital world, many higher education embracing technology in classroom and learning environment as means of delivering method. The growth of integrating technology has been largely powered not only by the mere presence of technology, but by the anticipation on the part of students that technology will be used as a tool to enhance the classroom experience and their learning (Tileston, 2004).
More profoundly, Hanna and de Nooy (2003) claimed student learning improves with the use of technology as an instructional tool. However, Timpson (1999) the idea of ‘learning’ can involve “memory, permanent change in behavior, measurable, understanding, and the ability to apply in another situation” (p. 29).

To date, though face-to-face instructional method is indisputable to be seen as one of the ways to promote collaboration, interaction, and to enhance student learning. Similarly, Timpson, Yang, Borrayo, and Canetto (2005), classroom interaction and connecting teaching and learning are vital to enhance learning. The adoption of hybrid learning is becoming prudent and extensively used in many higher educational institutions. However, Strauss (2005) averred the technology has been slower in the college instructional classroom.

As supported by Bates (2001), technology has been used to support and supplement classroom teaching with classroom aids such as slate, blackboard and chalk, textbooks, flip-charts, laboratory equipment, radio, film, television, the overhead projector, and computers. He asserted:

*Technology used in this way does not replace either the teacher or the classroom. Using technology to supplement classroom teaching does not radically change teaching methods. It merely enhances what would be done in the classroom in any case. (p. 17)*

With these ideas in mind, the question remains, what are the strategies that can be employed effectively both in face-to-face and hybrid courses? Therefore, this paper will look at the descriptions of face-to-face, hybrid learning and other related terms as proposed by Bates (2001) and Bates and Poole (2003) continuum of technology-based learning. Next, three strategies for effective use of technology in face-to-face and hybrid university level courses with evidence that each improves or enhances student learning will be examined, followed by summary and conclusion.

2. CONTINUUM OF TECHNOLOGY-BASED LEARNING

The continuum technology-based learning will be utilized to generate the following discussion on the accounts of face-to-face, blended or hybrid learning (mixed mode), distributed learning, distance education, and fully online. (see Figure 2 in the Appendix)

In Bates’s (2001) continuum, in the case of face-to-face teaching, at one end is ‘no online learning’ but on the other end, ‘fully online learning’ takes place in which “students must have access to computers and the Internet to do the course, and can take the course without having to attend any face-to-face classes” (Bates, 2005, p. 9), is structured in the event of distance education. In proportion to face-to-face or traditional learning environment, Dabbagh and NanaRiland (2005) underlined the following criteria: (1) bound by location and presence of instructor and student, (2) presented in real time, (3) controlled by an instructor, and (4) are linear in teaching methods. To contrast, in view of mixed learning approaches, Bates (2005) named mixed mode i.e. in between of the range; and Marlia (2008) remarked in the concept of mixed mode, “there was a reduced degree of face-to-face teaching and an increased degree of online learning” (p. 3). For the visualization of the face-to-face and blended learning particularly is illustrated in Figure 3 of the Appendix. Also, Harasim, Hiltz, Teles, and Turoff (1995) is in agreement to Bates definition of mixed mode delivery and emphasized “the electronic approach needed to be fully integrated into the curriculum and indeed had to constitute part of the course and course syllabus” (p. 80). Obviously, Henson (2006) highlighted the importance of the technological foundations of curriculum and the need to reform. He emphasized “We need to make certain that technology is used to create the kinds of teachers, curricula, and social climate that will bring constructivism into our classrooms” (p. 77).
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