Chapter 31

Preparing Teacher Education Students to Use Instructional Technology in an Asynchronous Blended Course

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ABSTRACT

This chapter reports a study that examined the effects of an asynchronous blended instructional technology course on teacher candidates’ learning. In this course, the online components and the face-to-face components were blended in a unique way. The limited number of face-to-face meetings were mainly dedicated to course introduction and the students’ group presentations. Overall, the students perceived that the online learning activities were effective in helping them to learn about the instructional technology. They were satisfied with the blended mode of this course and reported strong self-efficacy in technology integration. Implications in course design, online interactions and group work in blended courses were discussed.

INTRODUCTION

The rapid development of technology has enriched teaching and learning experiences. A significant outcome is the proliferation of distance education. More and more college students are taking classes online. According to WCET Distance Education Enrollment Report (Poulin & Straut, 2016) that used the data of the U.S. Department of Education, the distance education enrollment in public institutions grew by 12% from fall 2012 to fall 2014. More than 5.8 million students took at least one course online by fall 2014.

In higher education, online learning is characterized by instructor-led college courses that are dominated by asynchronous activities and are mediated by a Learning Management System (Lowenthal, Wilson & Parrish, 2009). Such online learning provides learners a structured and secure learning environment,
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gives learners control over the time and the location that they engage in learning, and helps to generate critical thinking among learners in asynchronous discussions. However, the lack of social presence and spontaneous interactions can affect learning experiences (Fadde & Vu, 2014). Blended learning aims to overcome the shortcomings of purely online learning by combining face-to-face class meetings with asynchronous online activities (Osguthorpe & Graham, 2003). The objective of this chapter is to report the findings of a study conducted in an asynchronous blended course and the students’ learning experiences. The purpose of this study was to examine the students’ perceptions on the effectiveness of online learning, their satisfaction with this blended course and their self-efficacy in technology integration.

BACKGROUND

Many definitions of blended learning are available in current literature. A commonly accepted definition is that blended learning is “thoughtful fusion of face-to-face and online learning experiences” (Garrison & Vaughan, 2008; p. 5). In blended learning, the mix of face-to-face and online components varies for each course due to “instructional goals, student characteristics, instructor background, and online resources” (Osguthorpe & Graham, 2003; p. 228). Some courses have more face-to-face meetings than online activities, while some other courses include more online sessions than face-to-face meetings. There are also some courses in which online components and face-to-face components are of equal proportion. Despite how face-to-face and online components are mixed, blended learning takes advantage of inherent benefits of online learning and face-to-face learning. In addition to the flexibility in time and location and the freedom to work at one’s own pace, the benefits of learning online include elimination of misunderstanding caused by poor verbal communication, avoidance of peer distractions, reduction of challenges resulted from cultural differences, development of time management skills, critical thinking skills and computer skills (Lei & Gupta, 2010). These benefits, along with strengths of face-to-face learning in social interactions, make blended learning be predicted as “likely to emerge as the predominant model of the future – and to become far more common” than either purely online learning or face-to-face instruction (Watson, 2008; p.3).

Benefits of Blended Learning

The benefits of blended learning have been examined in multiple disciplines. When comparing students who enrolled in different sections of English Literacy class, Tseng & Walsh (2016) found that the students in blended section reported higher level of learning motivation and learning outcomes than those who took the course in traditional format. In medicine, taking a course in blended mode helps to improve patient-centered communication skills of medical and pharmacy students (Hess, Hagemeyer, Blackwelder, Rose, Ansari & Branham, 2016). In an information science class, it was reported that blended learning approach enhanced student retention and the students were satisfied with this delivery format (Hoic-Bozic, Mornar & Boticki, 2009). A literature review was conducted to examine online and blended learning in the business disciplines (Arbaugh, Godfrey, Johnson, Pollack, Niendorf & Wresch, 2009). In the aspect of learning outcome, the researchers found that in general, online and blended learning were comparable to classroom learning. Positive effects of blended learning on students’ learning outcome were also found in business courses taken by the first-year undergraduate students (López-Pérez, Pérez-López & Rodríguez-Ariza, 2011). Some other researchers (Means, Toyama, Murphy, Bakia & Jones, 2010; Shachar
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