ABSTRACT

The 21st century has witnessed vast amounts of research into blended learning since the conception of online learning formed the possibility of blended learning in the early 1990s. The theme of this paper is blended learning in mainstream disciplinary communities. In particular, the paper reports on findings from the last two decades which looked at origination, development and future of blended learning through articles and other research publications. Based on over thirty journal articles indexed in Social Sciences Citation Index and other important databases, coupled with other related publications, this study explored the definition, advantages and problems of blended learning, arriving at the conclusion that more deficits may exist in either sole online or classroom learning compared with blended learning which combines both approaches although there may still be a certain number of disputes over blended learning. Educational and non-educational institutions may be wise to innovate their pedagogy towards a blended mode despite economic costs and other possible losses.

Keywords: Blended Learning, Classroom learning, Collaborative Learning, Face-to-Face Learning, Online Learning

INTRODUCTION

The theme of this paper is blended learning in mainstream disciplinary communities. In particular, the paper reports on findings from the last two decades which looked at origination, development and future of blended learning through articles and other research publications. In the early 1990s, the conception of online learning formed the possibility of blended learning (Senge, 1990). Since then studies on online learning have been flourishing towards integration with classroom learning. Learners tended to combine the newly acquired knowledge with previous knowledge on a certain subject (Collins and Berge, 1996).

The 21st century has witnessed vast amount of research into blended learning. The simplest form of blended learning was considered as a mixture of physical classroom activities and learning activities supported by online technologies (Garrison and Kanuka, 2004) and was further developed into the integration of learning activities, students, and instructors. Advantages of blended learning were extolled by many studies, among which were learning process facilitation via online or classroom technologies (Garrison and Kanuka, 2004; Vaughan,
2007), gap bridging between learning and working (Bohle Carbonell, Bohle-Carbonell, Dailey-Hebert, Gerken, and Grohnert et al., 2013), online collaborative learning promotion (Carr-Chellman, Dyer, and Breman et al., 2000; Gabriel, 2004), higher education benefit (Garrison and Kanuka, 2004), effectiveness among large and diverse student cohorts (Dziuban, Hartman, and Moskal, 2004; Sharpe, Benfield, Roberts, and Francis, 2006; Vaughan, 2007), adoptability in many institutions such as higher education (Kaur and Ahmed, 2005), industry (Executive Conversation, 2010), K-12 schools (Keller, Ehman, and Bonk, 2004), the military (Bonk, Olson, Wisher, and Orvis, 2002) and many other sectors.

However, problems of blended learning were demonstrated as well. It was argued that professional development would generally benefit from the extensive literature on teacher expertise that focused on how well teachers understood the content they taught and how well they understood how students learnt that content, but blended learning was not proved useful in teachers’ professional development (Bausmith and Barry, 2011). Some institutions were not ready to accept blended learning (Vaughan, 2007). It was even seemed as a dangerous conception (Seife, 2000) in that it threatened the integrity of the traditional pedagogy.

As a result, studies on blended learning reached various kinds of conclusions, among which both advantages and problems were revealed, and even the definition of blended learning did not arrive at a general agreement. The review of literature on blended learning, therefore, seemed necessary to summarize previous studies and to reveal a clear scenario for future research into blended learning.

**MATERIAL AND METHODS**

This review was conducted to extensively examine past studies on advantages and problems of blended learning. Its major objective was to provide a reference that was as extensive as possible and one that was useful for any interested reader. To achieve this objective, the following methods were used to locate and select studies for the main citation of this review. Firstly, online databases including Web of Science and Science Direct were searched ranging from the year 1990 to 2013 for relevant studies. The following key words guided the search: online education/learning, collaborative education/learning, classroom education/learning, face-to-face education/learning, hybrid and blended education/learning. Once an item was located via electronic search, the abstract was perused. If the abstract looked promising, then the item was obtained. Another complementary method involved close examination of the references of the selected articles for citations of additional relevant studies.

The criteria of selecting previous studies as the main citation of this study were: 1) the paper included had to be published in a peer reviewed journal in edited collections; 2) master’s or doctoral dissertations and short reports were excluded; 3) the paper had to focus explicitly or implicitly on blended learning; 4) the paper had to provide a sufficient description of data and data analysis from which the results were concluded.

Based on these criteria, 36 publications were found to be suitable for inclusion as the main citations (see Table 1).

It is worth mentioning that the included research resources are limited to the author’s own ability. The author can only reach the resources within his own scope. There may be other publications out of the author’s reach.

**RESEARCH QUESTIONS**

Once the nature of the sample was established, the publications were then further categorized by themes which arose from the corpus of papers. The focus questions were created by carefully reading and analyzing the literature, which were considered unsolved and urgent topics in the field of blended learning. They were described in detail as follows:
Implementation and Evaluation of Flipped Algorithmic Class
[www.igi-global.com/article/implementation-and-evaluation-of-flipped-algorithmic-class/217465?camid=4v1a](www.igi-global.com/article/implementation-and-evaluation-of-flipped-algorithmic-class/217465?camid=4v1a)

Common Features and Design Principles Found in Exemplary Educational Technologies
[www.igi-global.com/article/common-features-design-principles-found/2358?camid=4v1a](www.igi-global.com/article/common-features-design-principles-found/2358?camid=4v1a)