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TEACHING WITH TECHNOLOGY IN CLASSROOMS: IMPLEMENTING BLENDED LEARNING

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Abstract

The technology advancement has encouraged more applications of online learning including blended learning. Public and private higher education institutions have implemented various steps to promote and encourage the incorporation of blended learning in the learning and teaching processes. Numerous benefits of blended learning are evident both in the area of education and corporate industry which includes accessibility, resources, cost effectiveness, flexibility and broader opportunities for learning. This paper aims at providing further insights into the existing claim of the benefits and challenges in employing blended learning at higher education institutions. These include, but not limited to, highlighting the potential of incorporating several blended learning tools into teaching and learning processes and discussion of innovative teaching approaches and strategies. Ultimately, the deliberation can assist instructors to select and to make informed-decisions of appropriate tools to be employed in order to achieve specific learning outcomes so that blended learning could be effectively implemented.

Keywords: Blended learning, online learning.

1. Introduction

The massive growth of Information and Communication Technologies (ICTs) is rapidly changing the world, and it has changed the common traditional classroom methods into technology-enhanced learning systems. The nature of Gen-Z and their offspring, Gen Alpha and the requirement of 4.0 Industrial revolutions have further stimulated the urgent need to innovate the learning and teaching approach to include the elements of technology. Such phenomenon has fostered the existence of various learning and teaching platforms, for example the Massive Open Online Learning courses (MOOCs), Open Courseware (OCW), and institutional Learning Management System (LMS). The Ministry of Higher Education Malaysia (MOHE) has come forward and outlined the 10 shifts in Malaysia Education Blueprint 2015-2025 (Higher Education). Globalised Online Learning is one of the shifts in which Malaysia MOOC is authorized as one of the initiatives in support of the shift. Currently, there are a number of courses offered at Malaysia MOOCs and they are all available for learners' enrolment. Not only in Malaysia, many higher education institutions have adopted and some are adapting such technologies for the development of quality education, and to accommodate stakeholders for them to be engaged in the teaching and learning activities in their educational institutes. Despite various challenges in teaching and learning, educators are moving towards greater practice of ICT in classroom instruction and exercises so that learning could be enhanced. The application of ICT in education, or is also known as e-learning is believed to save cost and increase efficiency in teaching and learning. However, successful implementation of e-learning systems requires an understanding of the role of technology on higher education institutions and knowledge on current teaching and learning practices. In depth understanding on how e-learning platform could be mobilized is crucial so that online learning can take place effectively.

2. Problem Statement

Since the past few decades the expansion of technology has swiftly changed how lessons are taught and learnt. Technology is embraced as one of the means in shaping the teaching and learning processes. As the younger generation depends so much on technology in their daily life, it is indispensable for instructors to apply technology in their classrooms. Furthermore, with the rise of MOOCs in higher education settings in Malaysia and globally, learners more than ever need to be able to communicate online in English and therefore, they need to develop the ability to communicate effectively not only in English but also in online settings (Nik & Ainol, 2017). By combining the advantages of conventional teaching and e-learning, learners have the opportunity to learn, communicate and collaborate in a blended setting (Lin, Tseng & Chiang, 2017). Hence, exploring alternatives on how technology could effectively be applied in such setting is required and the current study aims to deliberate on this matter further.

3. Purpose of the Study

This paper intends to discuss several ideas in implementing blended learning. Such effort is an initiative to provide further insights into interactive learning atmospheres to corroborate the traditional teaching and learning approach particularly at higher education institutions. Finally, this paper attempts at providing valuable bases in understanding the integration of technology and pedagogy and in identifying the current obstacles and desired settings at institutions, for which in the end could help in a proper implementation of blended learning. To achieve

an efficient implementation of blended learning, an in depth understanding must be gained so that instructors can integrate all the different components of e-learning. In order to achieve the objectives, we reviewed related literatures to determine the current situation, concerns and challenges in applying blended learning, particularly at the higher education institutions. In addition, this paper also discusses some educational tools that are widely used as blended learning instruments.

4. Research Questions

This study intends to answer the following questions:

4.1 What are the benefits that blended learning could offer to higher education institutions' learners?

4.2 What are the challenges in implementing blended learning at higher education institutions?

5. Methodology

In order to attain the research questions, we adopted review methods to determine the current situation, concerns and challenges in applying blended learning. The current study reviews past studies that have discussed the benefits and challenges of employing blended learning at higher education institutions. Following Hemmingway and Brereton (2009), this study identified relevant published articles by searching titles with "benefits and challenges in blended learning" in the Social Sciences area. In the end, 47 articles were downloaded and analysed. Emerging themes gathered from the analyses were grouped according to blended learning features, blended learning benefits, blended learning as educational tools, implications and challenges of implementing blended learning.

6. Features of Blended Learning

Blended learning could be characterized as a concurrence of face-to-face and e-learning during teaching and learning instruction. Blended learning is a learning method that consolidates conventional face-to-face and e-learning learning atmosphere by engaging relevant learning models (Kaur, 2013). In certain circumstances of a blended learning atmosphere, learners may encounter fewer face-to-face instruction time with their instructors as they are anticipated to devote more time doing self-learning particularly in an online setting. Learners are allowed to decide their acceleration of study. Predominantly, blended learning integrates the paramount elements of face-to-face and online interaction in such a manner that it permits self-learning and offers deliberate contemplation (Güzer & Caner, 2014). Applying blended learning into the teaching and learning atmosphere is essential to suit the current trend and needs of learners.

7. Benefits of Blended Learning

As highlighted earlier, the Malaysia Education Blueprint 2015-2025 (Higher Education) has emphasized the need for Malaysia higher education institutions to approach progressively towards the implementation of globalized online learning. This may also include the concept of blended learning. Many higher education institutions have implemented blended learning to meet the new generation learners' need and global 4.0 market demand. The widespread of technology has opened up more opportunities to learn for learners at the universities. One of the teaching and learning alternatives for instructors is by applying blended learning.

Previous studies have proven that blended learning can significantly enhance learning (i.e., Grgurović, 2011, Ruthven-Stuart, 2003; Stracke, 2007). In the same vein, Nur Fatima and Izaham Shah (2016) defined blended leaning as an efficient integration of different delivery mechanism. This could include various teaching methods by instructors and different learning styles of learners. Applying blended learning in teaching and learning can provide opportunities for various techniques of learning and this has potential to create richer learning environment that could promote learning.

Furthermore, studies have shown that blended learning offers more advantages because it is more compelling in comparison to the conventional approach particularly in promoting creative thinking skills (Al-Madani, 2015). It also provides various benefits compared to single learning delivery medium (Rastegarpour & Badeleh, 2011) and is considered as the most innovative approach to support meaningful learning (Shaykina, 2015) including for public speaking practice (Ainol, Zailin Shah, Nik & Hafizoah, 2016). There are various motives to apply blended learning such as to improve pedagogy, personal presence and access to knowledge and content of the subject (Osguthorpe & Graham, 2003).

In terms of the achievements, studies have found that learners' achievement in blended courses might be determined by learners' conception of learning, recognition of responsibility and amount of interaction out of the classrooms (Bliuc, Ellis, Goodyear & Piggott, 2011; Chou & Chou, 2011; Smyth, Houghton, Cooney & Casey, 2012). In summary, studies on blended learning have proven that teaching and learning experiences could be embellished through the application of blended learning. Hence, blended learning is an inventive medium which could support educational experience among learners.

8. Educational Potential Tools

Universities have applied a Learning Management System (LMS) for the purpose of supplying support in the process of teaching and learning. One of the LMS that is commonly used is Moodle. Moddle is regularly used for posting online announcement, storing lecture notes, tutorial questions and assessments' marks. Moreover, Moodle could be used to provide instant feedback to learners individually. However, Moodle is not sufficiently adaptable to   assessments and this may cause problems to the users (Jong, Hafizan, Ang & Chong, 2014). Nurkhamimi, Rozhan and Ahmad Farid (2016) conducted a study in Universiti Sains Islam Malaysia (USIM) to analyse Moodle functions among postgraduate students. The findings revealed that although Moodle has a great potential, it is mainly used as a repository of materials.

Other than LMS, there are several game-based tools or is better known as gamification that could be a commendable alternative to assess learners' progress and performance and their responses during the learning sessions. These game-based tools are not only boosting learners' interest to participate in giving quick response but also offer pleasant learning experiences during the learning. According to Nisbet and Luther (2014), by having enjoyable experiences, learners will be stimulated to embrace deep learning. One of the gamification tools is Kahoot! and learners can merely apply Kahoot! via smartphones, tablets or any devices with internet connection and without having to download the application. Learners will need to login to Kahoot! by entering the pin specified by their instructors. Using Kahoot! is proven to promote learners' engagement in learning and it is supportive in building effective learning experiences (Hussein, 2015). Furthermore, Kahoot! was also found to encourage learners' engagement, motivation and attention (Wang & Lieberoth, 2016). Likewise, in a recent study

that explores the application of Kahoot! in learning vocabulary, Medina and Hurtado, (2017) claimed that Kahoot! improves motivation and learners' satisfaction towards Kahoot! is also found affirmative. In formal classrooms, instructors can use Kahoot! to design game-based quizzes and discussions. In a cross-sectional study of learners' perception towards Kahoot! as a formative assessment tool in Malaysian public medical universities, Kahoot! was claimed as a favourable formative assessment instrument that is viable, hands-on and creates fun learning. Although learners agree that it can be a tool to increase motivation, it might not be the best tool to simplify complex subjects (Ismail & Mohammad, 2017).

Another free online application that is extensively used is Edmodo. There is a similarity between the interface of Edmodo and Facebook. Therefore, it is easy for Edmodo users who are familiar with Facebook to navigate the application. Each Edmodo fellow owns a profile page that consisted of posts and groups. In addition, Edmodo users can upload a profile picture and share any videos or links. In the field of language education, Edmodo can become an effective social networking device to encourage cooperative learning through significant communication for language learners (Farha Alia, 2016; Okumura, 2017) as it increases learners' motivation (Alshawi & Alhomoud, 2016). In a case study conducted among teachers, Ekici (2017) found that Edmodo offers the prospect of sharing information, experiences and opinions. The dissimilarity between Edmodo and other social network sites for instance Twitter and Instagram is that Edmodo not only serves as a social learning platform which aimed for interaction and collaboration and information sharing but also could be used for allotting assessments and stimulating conversation between learners, instructors and parents (Balasubramaniam, Jaykumar & Fukey, 2014). This is because the users can access libraries and materials shared by the instructors and publics.

Another online application that is currently available is Wiki. A number of wikis were established such as PBworks (previously known as PBWiki), Google Docs, MediaWiki and WikiSpaces, which are extensively applied in education. "Wiki" evolved from wiki-wiki, the Hawaiian expression that is defined as quick. A wiki is described as a web-based broadcasting instrument which offers learners and instructors chances to receive, produce and shape knowledge sharing. This web-based collective software device is created on Web server and could be applied to accelerate collective information construction and contribution. It permits authors to compose and alter their text at any stage virtually from any place. Wikis are reflected as collective modes to boost the allotment of idea and knowledge creation. Moreover, there are many rewards for the practices of wikis in language learning have been proposed. For instance, it offers easiness of the tool and openness (Dobeli, 2005), is convenient and ingenious (Kovacic, Bubas & Zlatovic, 2008), affords better cooperative writing practice (Chao & Lo, 2011), bids knowledge expansion and language improvement (Lund, 2008), reinforces writing lessons (Lamb, 2004) and collaborative writing (Parker & Chao, 2007), allows stage of community interaction and collaboration (Kern, Ware & Warschauer, 2004; Su, 2011), increases learners' level of interactive communication and responsibility (Oskoz & Elola, 2011), functions as a channel for collaboration and collective production (Lund, 2008; Zailin Shah, Nik & Ainol, 2012) and strengthens the second language writing performance (Wang & Turner, 2004). Likewise, a study in a task-based instruction context using WikiSpaces has found that learners' motivation is significantly correlated with language production (Umi, Nik & Nor Shidrah, 2015). Furthermore, this evolving Web 2.0 device is believed to deliver scaffolding to learners (Lee, 2010; Li & Zhu, 2013) and encourage various skills for example teamwork, perpetual modification and information creation (Purdy, 2009).

The findings from previous studies on the educational tools suggest that engaging learners in online learning platforms may transfer accessibility and pleasure to instructors and learners. Hence, having an in-depth understanding of how and in what way these platforms could be applied in classrooms is vital so that teaching and learning process could be enriched.

9. Implications and Challenges

In spite of the benefits that blended learning could offer, there are some issues largely regarding instructors attempt to switch to blended learning approach as explained by researchers particularly in Malaysia (Haryani, Wan Faezah & Nor Aini, 2012; Jong et al., 2014; Tham & Tham, 2011). Nevertheless, there are a number of instructors who are optimistic with the changes (Embi & Panah, 2014). According to the instructors who are struggling to the change, the shift is rather too severe as there are too many preparation, planning and concern that have to be catered along the process.

In a review of literature by Amrien and Mohamed Amin (2016), they have summarised several obstacles confronted by the teachers such as greater amount of work and commitment, lack of pedagogical knowledge as well as inadequacy of technical skills to conduct the teaching and learning process. Furthermore, teachers were also found to experience troubles in determining the proper consolidation of face-to-face and online learning. Nonetheless, the paper has also revealed the eminence of employees coaching, sustenance and networking as essential methods to aid teachers endure with aforementioned problems. Furthermore, the review has also proposed five important points for a successful blended learning to take place. Firstly, prior to any implementation of blended learning, institutions need to conduct a detail needs analysis so that information on support mechanism and facilities could be obtained. Secondly, institutions should select the most suitable model to implement blended learning. Thirdly, the staff particularly the instructors should be provided with constant training so that it can enhance their knowledge and skills on how to apply blended learning efficiently. Next, institutions should create a networking system to inspire instructors to work collaboratively among the circle and encourage sharing of knowledge. Finally, institutions should set up a support system so that instructors and learners can share the challenges they faced in using the tools.

10. Conclusion

Previous studies have demonstrated that blended learning, regardless its application design, offers substantial promising results on the overall teaching and learning processes. The exploration of appropriate tools coupled with suitable teaching strategies to deliver blended learning is an endless endeavour. Nevertheless, it is anticipated that the issues and tools discussed in this paper could inspire academicians to embrace blended learning. Consequently, it may foster learners' motivation and encourage dynamic participation in teaching and learning context.

Acknowledgements

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