

## BLENDING LEARNING IN HIGHER EDUCATION: AN OVERVIEW

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### Abstract

Blended learning is an innovative approach in creating motivating and meaningful learning experiences to fulfil learner's technological demands in the rapidly changing electronic era. Recognizing the emerging implementation of this learning method, this study explores the definitions, the rationale, past studies, the importance as well as the drawbacks, the issues arising and the suggestions in achieving a successful blended education implementation in higher education settings. From this study, we found that blended environment encourages the foundation of creating independent learners with reasonable critical thinking skills that are valuable for the current working environments. Blended learning is also a solution for classroom insufficiencies as well as teaching and learning flexibility. Nevertheless, not all the courses in higher education settings could apply the blended learning. Therefore, options should be given to the learners by the institution's administrator to either choose a conventional teaching method or a blended course. This alternative will overcome the issues for the low achievers who are unable to survive in blended approach and caters the needs for difficult courses that require a fully face-to-face classroom environment.

**Keywords:** Blended learning; blended learning in Malaysia; implementation of blended learning in higher education

### 1.0 INTRODUCTION

The use of Internet and Communication Technologies (ICT) has transformed our daily life enormously in many ways. ICT has established a modern approach in conducting businesses, online banking and government services. It also revolutionized the manner of communication beyond boundaries. Moreover, ICT changes the way in accessing, searching and disseminating information. ICT also facilitates in information sharing in the form of text, video, audio, etc. Most importantly, ICT has characterized a transformative innovation in the educational atmosphere, particularly in the higher education settings in the 21st century. It is a significant move to transform the higher education learning environments to accommodate the fast pace of ever increasing technological changes as mentioned by William (2002). Therefore, according to Garrison and Kanuka (2004), leaders of higher education are taking up the challenge and using this opportunity in changing their institutions to fulfil their potential student's connectivity demands and meeting the expectations of society for a better quality of learning outcomes and experiences.

In fulfilling the latest high technological needs and expectations, higher learning institutions have been incorporating web-based learning into their traditional class education. Masrom (2008) mentioned in his

study that the implementation of web-based learning in Malaysia's higher education is seen as an effective choice of education advancement. In a study by Haron, Abbas, and AbdRahman (2012), they stated that the first generation of web-based education that is also known as e-learning programs are said to be literally presenting the conventional classroom learning materials onto the web settings. However, she added that the second wave of e-learning has been enhanced with an integration of diverse delivery techniques into this web-based learning and are called as the blended learning.

There are many definitions of blended learning that we can gather from the literature reviews. Among the most cited is a research conducted by Garrison and Kanuka (2004) that described the blended learning as a combination of classroom teaching and online experiences. Other than that, Singh (2003) perceived blended learning as a significant and motivating learning approach that incorporated diverse delivery media. In a recent study by Sabri, Isa, Daud, and Aziz (2010), they defined blended learning as an integration of conventional classroom teaching with a combination of media, tools and teaching methods in web-based environment settings. As mentioned by Zhang (2010), blended learning is not a replacement of the face-to-face class education with a web-based education. On the other hand, blended learning is a superior single delivery teaching approach that combines advantages of both conventional face-to-face classroom instructions with an online learning experience. Therefore, this study explores the past researches on blended learning, the rationale of blending, the advantages and drawbacks of this approach as well as observing the issues and suggestions on blended learning, focusing only in higher education environment settings.

## **2.0 LITERATURE REVIEW**

There are many earlier studies on blended learning. Most of the past researches perceived blended learning as an innovative teaching approach that combines diverse delivery media, which support a meaningful and exciting learning experience. For example, Garrison and Kanuka (2004) is a most cited article that describes the prospect of blended learning in higher education settings. In their study, they discussed the problems faced in higher education learning environment and explained the benefits that blended learning as an effective solution to overcome these problems. They also indicated that blended learning is a new direction for higher education institutions revolution for a motivating learner centred education experiences. However, they did not explore on the effectiveness of blending learning in critical and reflective thinking of learners and advised other researchers to investigate into this issue.

Many recent studies were also carried out to observe the effectiveness of blended learning as a present learning method. Guzer and Caner (2014) stated that a study by Woltering, Herrler, Spitzer, and Spreckelsen (2009) found that blended learning enhanced student's enthusiasm and satisfaction on their learning outcomes. Furthermore, they said that Melton, Graf, and Chopak-Foss (2009) also observed a higher satisfaction level in student's learning process from blended approach as compared to the traditional classroom environments. Although blended learning presents many benefits, there are studies on blended learning with a different perception. A research by Chen and Jones (2007) as mentioned by Guzer et. al. (2014) stated that even though blended learning improve on their critical thinking skills, nevertheless the students feel that the information and learning experiences during blended learning are more likely to be confusing at times as compared to the traditional face-to-face classroom settings. Another research by Chandra and Fisher (2009) reveals that despite the fact that blended learning promotes a convenient, easily accessible, constructive online communications with peers on the subject and a more interesting learning process, nevertheless they favoured a face-to-face enquiry sessions in many instances. Based on all the previous researches mentioned earlier, it appears that students preferred the modern approach of online learning environments, but they still want to maintain the face-to-face component of the course. Hence, this motivates us to investigate more into blended learning, a novel approach that support advantages of both online and traditional learning settings.

### 3.0 WHY MUST HIGHER EDUCATION PRACTICE BLENDED LEARNING?

Traditionally, the teaching and learning methodology in higher education classroom settings focus on a face-to-face lectures, tutorials, laboratory sessions and etc. As the extensive use of digital technology and new generation of learner's tendencies on computers and the Internet, there must be an effective reformation to the face of today's education processes. It appears that the conventional approach of teaching in class that was superior in the earlier days is seen as an obsolete delivery mode in the 21st century higher education environments.

#### 3.1 Irrelevant Teacher Centred Approach

A recent study by Okaz (2015) described that students feel dull and disconnected with traditional teaching methods that are portrayed as a passive teaching style that daunt the student's to think critically. This is due to the presence technology that has transformed the student's manners, attitudes and preferences in learning modes and communication approach beyond the classroom. In order to provide a motivating and supporting classroom climate for the current generation, blended learning is seen as an effective method to cater the increasing anticipation and demands for student's education survival. In addition to that, according to Kashefi, Ismail, and Yusof (2012), industries expressed dissatisfaction on the quality of graduates, particularly engineering graduates that are technically incompetent, lack of communication and critical thinking skills as well as experiencing difficulty with team working. The industry assumed that the reason behind these disappointing qualities of current human capital was attributed from traditional teacher centred approach that is lacking in utilizing the whole brain. Therefore, Graham (2004) encouraged the blended learning approach to attain pedagogical richness.

According to Sivakumar, Namasivayam, Al-Atabi, and Ramesh (2013), combining a formal classroom element with the web-based learning environment is capable in offering a more comprehensive collaborative learning and problem solving skills that are almost similar to an informal workplace learning environment. Furthermore the study added, rather than the former teaching and learning practice in higher education that concentrated on a non-interactive approach, they suggested that the learners should experience three phases of learning processes. These phases are briefly explained in Table 1 below:

**Table 1 Phases of blended learning processes in attaining pedagogical richness**

Learning Phase	Types of Learning Approach	Learning Outcomes
Phase 1	Online Self-paced Learning	To acquire background information
Phase 2	Face-to-face Learning Modes (Lectures, Tutorial, Laboratory Sessions)	To focus on active learning, application, case studies and develop decision making skills
Phase 3	Online Learning and Support	To transfer the classroom learning to the workplace environment

#### 3.2 Increase Access or Flexibility of Time and Place

Other than that, Sivakumar et. al. (2013) mentioned that another reason Graham (2004) promoted the blended learning approach is to increase access or flexibility of time and place. Students favoured online learning while retaining a small amount of the face-to-face classroom interaction that indirectly reduced their formal classroom seat time. A study by Okaz (2015) stated that by providing this sort of flexibility, students are given the opportunity to follow their own pace and explore the subject's content at their own time. Students who are digitally literate can search more information on the subject matter, discuss the lessons with their peers and delivered their critical opinions via online tutorial or online discussion groups since they have ample time beyond classroom's lessons. Thus, this is what Garrison and Kanuka (2004)

referred blended learning as a platform to facilitate in independent and collaborative learning experience for higher education students.

### **3.3 Solution to Classroom Insufficiency by Reducing the Seat Time**

In addition to the advantages of student's flexibility of time and place through blended learning as mentioned earlier, lecturers and faculty can also benefit from the increased flexibility in their teaching schedules as said by Owston, York, and Murtha (2013). Blended learning will combine the execution of online learning while retaining a small amount of the face-to-face classroom interaction that indirectly reduced their formal classroom seat time. This will eventually contribute to the efficient use of the classroom space and overcome the problem of classroom insufficiency as mentioned by Sabri et. al. (2010). They also added that instructors are also given flexibility in teaching through the application of online tutorials and online discussion with their students that can be done at anytime.

### **3.4 Cost Effectiveness**

The flexibility of time and space not only benefited the students, lecturers and faculty, but it also reduced cost in physical infrastructure and improved scheduling efficiencies as revealed by Graham (2004) and later by Sivakumar et. al. (2013) in their studies.

### **3.5 Building a Community of Inquiry**

Blended learning combines the synchronous verbal and asynchronous written communication that promotes the higher levels of knowledge sharing between educators and learners through critical discussion and reflective thinking as pointed out by Garrison and Kanuka (2004). Previously, in a full face-to-face classroom setting, most question and discussion in class will be answered by students spontaneously with prompt response and limited knowledge on the subject matter. In contrast, through an asynchronous online discussion, communicating the feedback on any issues especially those problems that required critical thinking can better be achieved since students have sufficient time to think. Internet discussion will become more attentive, rational and supported by evidential resources as mentioned by Meyer (2003) since it will provide permanent documentation that increases over the time. On top of that, blended learning that includes online discussion will enhance the competency in learner's writing skills. Students are required to express their questions, answers, feedbacks and opinions in proper written form via the Internet. The blending of online learning and conventional classroom tutoring will provide a self-motivated and meaningful education experiences that Garrison and Kanuka (2004) mentioned as knowledge construction centred.

## **4.0 DRAWBACKS AND ISSUES IN BLENDED LEARNING**

Blended learning implementation also involved some issues of concerns. There are several earlier research and recent studies that discussed on its drawbacks. In a research by Graham (2004), he described five matter of concern regarding blended learning. There were the loss of classroom community feelings, role of self regulation as an independent learner, support and training for instructors and learners, digital divide and cultural adaptation of course materials. Other than that, there is an also technical issue regarding the online component of blended learning that has to be tackled as revealed by Sabri et. al. (2010).

#### **4.1 Loss in Classroom Community**

Graham (2004) suggested that learners of higher education should be given options to select either a face-to-face settings, completely online or blended education for each of their course. One of the reasons for the learner's preferences selection on the instructional mode is because according to a study by Paechter and Maier (2010) as mentioned by Okaz (2015), students believed that a traditional classroom setting will be better in creating social interaction, building social-emotional relations, support mutual team-working and improved learning process with other peers. He added, in a blended environment, some students do not have a sense of belonging or developing in group identity. The learners not only experienced from isolation of a lively social interaction with peers, but they also incapable to connect with instructors in a blended environment that usually lacking of prompt response.

#### **4.2 Role of Self-Regulation as an Independent Learner**

According to Collis (2003) as discussed by Graham (2004), learners should uphold strong self-discipline to be successful in the online learning component in blended settings. Students should be willing to be independent learners in order to sustain in blended learning environments. Okaz (2015) mentioned that learners who obtain lower grades in blended environment are those who are lack of enthusiasm to learn or reluctant to endeavour into a novel instructional approach outside their comfort zone.

#### **4.3 Support and Training for Instructors and Learners**

Instructors required training so that they are flexible to constantly modifying their course content due to the rapidly changing of technology. Okaz (2015) also said that the instructors will also need the Information Technology (IT) expert that can provide technical support for troubleshooting any computer-related problems. Therefore, as said by Graham (2004), blended learning will demand additional of the instructor's time, thus the instructors should be willing to transform themselves into this new organizational culture in order to accept blended approaches. On the other hand, higher education should also provide learners with computer-related and technological skills to succeed in blended environments. This is because as mentioned by Okaz (2015), some students from a different social economic backgrounds might be facing difficulties in accessing or adapting into the online learning component in blended learning due to lack of IT skills and knowledge. Okaz (2015) also added up that since many younger generations are more technologically literate, however, higher education needs to cater for the matured older generation students to keep them equipped with the rapid ICT technology advancements through these trainings.

#### **4.4 Digital Divide**

In a study by Graham (2004), he expressed his concern on blended learning implementation in countries around the world with different social economic conditions. He is uncertain on the ability of blended approaches in fulfilling the needs of diverse populations with a reasonable cost. Likewise, Okaz (2015) also raised a concern on technological settings in higher education for some countries that are not well equipped for electricity breakdown, thus it might not be practical to rely on online components in blended education.

#### **4.5 Cultural Adaptation of Course Materials**

In the traditional classroom settings, course materials are usually culturally relevant and meaningful as stated by Graham (2004). Conversely, in an online learning environment, a uniform learning material will be disseminating globally over the Internet. In order to maintain its significance and relevance, the course materials should be customize to meet the requirements of the local education community.

#### **4.6 Dealing with Technical Issues**

A research by Sabri et. al. (2010) has disclosed a problem that deals with computer-related and technical issues when using the web-based component of blended settings. Among the problems raised were the web page timed out, slow internet accessibility and difficulties in uploading course materials. In addition, students also complaint on having to tolerate interrupted sessions during online assessments and online discussion due to these technicality inconveniences.

#### **5.0 RECOMMENDATIONS TO SUCCEED IN BLENDED ENVIRONMENTS**

As we have gone through the studies as early as 2002 until the recent research done in 2016, we can gathered many significant suggestions and discussions on the successful execution of blended education. These include developing solid policies and operations, constructing proper planning, allocating critical resources and providing strong technical support as described in a study by Garrison and Kanuka (2004). There need to be superior policies and operations to promote blended education so that it will be an accessible and cost-effective learning method that offers a convenient and exciting education experience particularly for a high student's enrolment and in demand courses. Apart from that, according to Garrison and Kanuka (2004), the establishment of proper planning that encompasses strategic and operational planning are also important to thrive in blended education. Strategic planning such as fulfilling the goals, impending costs, existing resources as well as operational planning that includes advertising, identifying shared resources, managing technology and building effective assessment process should not be disregarded. In addition, Maarop and Embi (2016) suggested the Higher Learning Institution (HLI) to carry out a needs analysis before planning a blended course so that they can select a blended learning model that fits appropriately for their institution.

Furthermore, human capital and technical resources are said by Garrison and Kanuka (2004) as a very vital criterion to the development and delivery of blended courses. A technology proficient instructor as well as a poorly computer literate educator will be greatly in need for the assistance of Information Technology (IT) experts that are also well versed with the blended learning requirements. According to Maarop and Embi (2016), issues such as increased workload, time commitment, lack of pedagogical and technical skills can be overcome by staff training and providing sufficient IT support system. These IT specialist should be capable of supporting personal attention, motivational strategies for sceptical instructors, guarantees the readiness of course management tools and also ensuring that the technical equipments are reliable, up-to-date and user-friendly. Additionally, other than providing technical support through IT specialist, the instructors can collaborate with other instructors in the same interest group by sharing ideas and best practices of blended courses through a networking system as suggested by Maarop and Embi (2016). Finally, according to Garrison and Kanuka (2004), the higher education institutions that plan to blend their learning should be offering strong technical support for teaching faculty as well as their students. They suggested a dedicated student service support centre to aid students with software information, Internet access and computer skills to succeed in a blended learning environment. On the other hand, teaching faculty will also required technical support and assistance in fulfilling their course development needs. They recommended to create a course development team that consist of instructor as the subject matter expert, an instructional designer for designing course materials and a media specialist who will be help out in course materials creation.

## 6.0 CONCLUSION

Blended learning is a transformation from an instructor-centred to an emphasis of a learner-centred education as stated by Abdulrasool, Mishra, and Khalaf (2010). In this era, a single delivery mode in teaching and learning is incapable to support student's engagement, learner's preference, relevance, social contact and effective learning as mentioned by Maarop and Embi (2016), hence a combination of several delivery modes in blended learning will provide an up to date solution to this issue. Blended learning supports independent learning through analytical, innovation and knowledge enquiry using interactive and motivating teaching approach. At present, there are industry demands for higher education to produce human capitals that can practice knowledge in new and different working environments as raised up by Sabri et. al. (2010). The combination of blended technology with face-to-face instructional method can stimulate the development of employability skills for independent learning with continuous improvement and enhancing critical thinking skills that are crucially necessary in today's graduates.

In Malaysia, Grapragasem, Krishnan, and Mansor (2014) stated that the virtual classroom, e-learning and blended learning are gaining momentum and becoming the current delivery mode of teaching and learning. According to a study by Norazah, Mohamed Amin, and Zaidan (2011) as mentioned by Grapragasem et. al. (2014), there are approximately 50% of the courses offered in 11 institutions of higher learning in Malaysia are online courses. Moreover, from Norazah et. al. (2011) findings, the students considered the online courses more appealing and inspiring, and at the same time, instructors agreed that the online courses benefited students and is an effective means of the current communication. In most of the studies reviewed by Guzer et. al. (2014), blended learning is perceived as a practical, motivating, supportive and flexible for its learners. Unfortunately, these are not the only criteria sufficient in creating a successful learning atmosphere. According to Owston et. al. (2013), since blended learning encourages independent learners; this instructional approach may not be functioning well for low achievers students. He suggested that the higher education institution's administrators to consider offering students option either to enrol in a fully face-to-face or blended course. Moreover, Sabri et. al. (2010) revealed that blended component is not suitable for all courses, thus offering students alternative will also benefited students registering for difficult courses.

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