

## Exploring Factors that Influence the Usage of Blended Learning among Academicians: A Qualitative Inquiry

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**Abstract:** This research investigates on factors that influence academicians in blended learning. There are many higher learning institutions in Malaysia had implemented blended learning because of the effectiveness as a learning approach. However, studies had shown academicians were apprehensive about using blended learning in the teaching and learning activities. The main objectives of this study are to investigate factors of using blended learning among academicians and to provide recommendations to improve the usage of blended learning among academicians. The qualitative data were gathered from online survey among academicians in a local university in Malaysia. The qualitative data were analyzed by using thematic analysis. Based on the study, there are seven factors of using blended learning among academicians which are ease of use, university encouragement, flexibility, attractiveness, new technology usage, university policy and learning aids. The study also found that there are three main factors of using blended learning among academicians which are university encouragement ease of use and flexibility. It is found that there are three blended learning advantages among academicians which are mobility, flexibility and saves time. In addition, there are three challenges of using blended learning which are technical challenges, organizational challenges and instructional design challenges. The recommendations were based on the challenges of blended learning using among academicians. The recommendations include: improving the IT infrastructure setting-up more relevant policy, guideline and standards for the blended learning adoptions and implementations at the organization and incorporating the elements of flexibility, adaptive, innovative, responsive and dynamic instructional design that fits with the mental model, expectations and requirements of different type of learners. Future research involves the development of mobile teaching e-Inclusion value chain framework.

**Key words:** Blended learning, mobile learning and technology, mental model, value learners, e-Inclusion, chain

### INTRODUCTION

In general, blended learning involves the usage of new education methodologies and practices to emphasis on an active learning centered on the student (O'Connor *et al.*, 2011) as compared. The approach is different with the traditional approach which emphasizes teacher-centered approach assuming a passive learning by students.

There are growing previous researches of blended learning in Malaysia (Haron *et al.*, 2012; Isa *et al.*, 2015; Isa, 2016) that provide the motivation to embark on this research. The followings are few of the issues highlighted in this research related to the blended learning adoptions in Malaysia:

- The low usage of blended learning among academicians
- The factors of using blended learning among academicians are still unknown

Thus, the research questions for this research are:

- What are the factors of using blended learning among academicians?
- What are the recommendations to improve the usage of blended learning among academicians?

The main objectives for this research are:

- To investigate factors of using blended learning among academicians

- To provide recommendations to improve the usage of blended learning among academicians

### MATERIALS AND METHODS

The instrument is the use of tools for collecting information from respondents as well as background information, opinions, reactions and attitude. There is also section that provides open ended question in order to collect opinion users towards factors, usage, advantage and challenges about blended learning.

The aim of analysis is to identify the respondents who dominate the selection factors using blended learning. The qualitative data collected from this study of questionnaires and interviews were analyzed by using thematic analysis applied. It is the most common form and is one of the most convenient ways to categorize data according to predefined themes of analysis in qualitative research (Guest and MacQueen, 2012). Boyatzis (1998) defined thematic analysis as “qualitative information encoding process” where researchers label the data in accordance with the relevant code. The general steps for data analysis are:

**Step 1:** Data from observations and data specified by the user in the interviews collected.

**Step 2:** Read data before copying it to the relevant code. These codes are the same context is grouped by theme by studying the properties of capability assessment.

**Step 3:** Encoded data are summarized and a map with the research questions to be analyzed.

**Step 4:** Interpret data to see a similar pattern to answer the research questions.

**Step 5:** Generate recommendations to improve the system design for a better ability to learn.

### RESULTS AND DISCUSSION

Table 1 shows the respondents demographic characteristics according to their gender, age, qualification, previous experience, length of services as an academicians and designation. The aim of demographic profile is to capture the respondent’s background information such as gender, age, qualification, previous experience, length of services as an academicians and designation. Descriptive statistics for participants experience with blended learning course are shown in Table 2.

Table 1: Demographic profile

Demographic characteristics	N	Percentage
<b>Gender</b>		
Male	3	16.7
Female	15	83.3
Total	18	100.0
<b>Age</b>		
<30	1	5.6
30-39	12	66.7
40-49	3	16.7
>50	2	11.0
Total	18	100.0
<b>Qualifications</b>		
PhD	3	16.7
Masters	15	83.3
Total	18	100.0
<b>Length of services as an academicians (years)</b>		
<5	5	27.8
5-9	9	50.0
10-14	2	11.1
25-29	2	11.1
Total	18	100.0
<b>Designation</b>		
Lecturers	13	72.2
Senior lecturer	3	16.7
Associate professors	2	11.1
Total	18	100.0

Table 2: Experience with blended learning courses (N = 18)

Experience	N	Percentage
<b>Number of course facilitated in blended learning environment</b>		
1-2	10	55.6
3-4	4	22.2
≥5	4	22.2
Total	18	100.0
<b>Years of facilitating course in a blended learning environment</b>		
<1	3	16.7
1-3	10	55.6
4-6	4	22.2
Total	18	100.0
<b>Experience with blended learning</b>		
No experience	1	5.5
As student	3	16.7
Others	14	77.8
Total	18	100.0

Interviewees through email from the 18 Key Informants (KI) from a local public university in Malaysia described how they addressed the factors that drive them to use blended learning, advantages of using blended learning and challenges of using blended learning.

There are 7 factors (themes) of using blended learning identified by key informants. The followings are the identified factors and sample of the qualitative responses.

**Ease of use:** Ease of use referring to degree to which people believe it using a particular system is free effort. Ease of use in terms of conducting multiple choice questions test, uploading notes, communicating with the students, materials for teaching can be easily access by the students and academicians do not have to bring pen drive to classes. The followings are the examples of qualitative responses for the factor ease of use:

“Ease of use, ...,” (KI1)

“It easy, ...,” (KI2)

“Ease of use, ...,” (KI4)

Based on the responses of key informants above, the ease of use are important to blended learning use. The ‘ease of use’ is an important criterion for blended learning usage (Haron *et al.*, 2012).

**University encouragement:** By using blended learning in education can be identified from the outside rather than lecturers support self-exploration. Academic regulations can be one factor that particular technology to be used. Pedagogical support is responsible in providing a clear understanding of the use of blended learning and the benefit. The followings are the examples of qualitative responses for the factor university encouragement.

“University encouragement” (KI1)

“University encouragement, ...,” (KI4)

“University encouragement, ...,” (KI6)

“University encouragement” (KI7)

“University encouragement” (KI18)

**Flexibility:** One positive thing to promote the use of blended learning in the classroom is the flexibility it offers. The academicians know that education is not one size fits all. The right technology can help meets the needs of each student while still appropriate under resource and time constraints of modern education. The followings are the examples of qualitative responses for the factor flexibility.

“Flexibility, ...,” (KI4)

“Lack of time in class” (KI5)

**Attractiveness:** Blake *et al.* (2008) proposed an “Attractiveness of the face-to-face and online learning is the assumption that the organic designers can integrate the best of each mode” to meet both the needs of students and the intention of the learning experience. The followings are the examples of qualitative responses for the factor attractiveness.

“Attractiveness,...,” (KI8)

**New technology usage:** The user’s perception towards learning adapted as the use of new technology is the trend in the use of technology and blended learning is regarded as an important medium for the medium for educational purposes and majority of users are willing to accept new mean although, restrictions. The following is example of qualitative responses for the factor new technology usage.

“New technology usage” (KI9)

**University policy:** The literature suggests challenges which include established policies and mentorship that academicians should try to adapt (Wallace and Young, 2010). University must include blended learning in their policy, so that, the academician will follow the policy. The policy in the identified local university is 70% face to face lectures and 30% none face to face. The followings are the examples of qualitative responses for the factor university policy:

New technology usage” (KI9)

**Learning aids:** The followings are the examples of qualitative responses for the factor learning aids.

“Learning aids” (KI8)

There are three main factors (themes) of using blended learning identified by key informants. The followings are the identified factors and sample of the qualitative responses:

**University encouragement:** By using blended learning in education can be identified from the outside rather than lecturers support self-exploration. Academic regulations can be one factor that particular technology to be used. Pedagogical support is responsible in providing a clear understanding of the use of blended learning and the benefit. The followings are the examples of qualitative responses for the factor university encouragement.

“University encouragement” (KI1)

“University encouragement, ...,” (KI2)

“University encouragement” (KI9)

“University encouragement” (KI18)

**Ease of use:** Ease of use referring to degree to which people believe it using a particular system is free effort. The followings are the example of qualitative responses for the factor ease of use.

“Ease of use, ...,” (KI1)

“It easy, ...,” (KI2)

“Ease of use, ...,” (KI4)

Based on the responses of Key Informants above, the ease of use are important to blended learning using. The ‘ease of use’ is an important criterion for blended learning usage (Haron *et al.*, 2012).

**Flexibility:** One positive thing to promote the use of blended learning in the classroom is the flexibility it offers. Academicians know that education is not one size fits all. The right technology can help meets the needs of each student, while still appropriate under resource and time constraints of modern education. The followings are the examples of qualitative responses for the factor flexibility.

“Flexibility,...,” (KI4)  
“Lack of time in class” (KI5)

There are three blended learning advantages (themes) identified by Key Informants (KI). The followings are the identified advantages and sample of the qualitative responses:

**Mobility:** According to Azizan (2010), blended learning extends the reach and mobility as one benefit of blended learning. The followings are the examples of qualitative responses for the mobility advantages:

“Mobility...” (KI4)  
“Mobility” (KI10)

**Flexibility:** According to Azizan (2010), blended learning offers flexibility and efficiency. The followings are the examples of qualitative responses for the flexibility advantages:

“Flexibility (time)” (KI15)  
“Flexibility when need to do class replacement” (KI16)

**Saves time:** The followings are the examples of qualitative responses for the saves time advantages:

“Saves time no need to teach topic in class, ...,” (KI5)  
“It can reduce face to face teaching time, ...,” (KI6)

There are three challenges of using blended learning which are technical challenges, organizational challenges and instructional design challenges:

**Technical challenges:** Technical challenges will not get technology to work on the network. Instead, it consists of ensuring the success of the program through appropriate technology and support. The followings are the examples of qualitative responses for the technical challenges:

“Internet coverage, ...,” (KI2)  
“Poor internet connection” (KI3)  
“Internet line (slow, heavy traffic at peak times)” (KI4)  
“It is the internet capabilities while accessing the blended learning tools” (KI8)  
“Internet connection and facilities” (KI9)  
“Instability of the server” (KI10)  
“Unpredictable Wi-Fi connection” (KI11)  
“Network problem, ...,” (KI16)  
“Technical difficulty such as system breakdown” (KI17)

**Organizational challenges:** The followings are the examples of qualitative responses for the organizational challenges:

“The timing between the students and lecturer’s online activity is different which makes live online discussion to be difficult” (KI6)  
“Readiness of the participants” (KI7)  
“Maybe some of the students did not understand well about the questions” (KI12)  
“Students do not read the portal. Still need to remind them via SMS/WhatsApp on any updates posted in the student portal” (KI13)  
“Commitment and participation” (KI15)

**Instructional design challenges:** The followings are the examples of qualitative responses for the instructional design challenges:

“To attract students to participate at the beginning stage, have to create/arrange creative projects to get students involved and attracted, to create something of value for the students (other than awarding marks to them)” (KI1)  
“Not enough time to make videos” (KI5)  
“I have to spend some times to design online quizzes and flash” (KI18)

## CONCLUSION

The main objectives for this research are:

- To investigate factors of using blended learning among academicians
- To provide recommendations to improve the usage of blended learning among academicians

The part of this study will review by summarizing all findings achieved from each of the objectives. The review as follows:

**Objective 1:** To investigate factors of using blended learning among academicians. Based on the study, there are seven factors of using blended learning among academicians which are ease of use, university encouragement, flexibility, attractiveness, new technology usage, university policy and learning aids. The study also found that there are three main factors of using blended learning among academicians which are university encouragement, ease of use and flexibility.

**Objective 2:** To provide recommendation to improve the usage of blended learning among academicians. The recommendations will be based on the challenges of blended learning using among academicians. The recommendations include: improving the IT infrastructure setting-up more relevant policy, guideline and standards for the blended learning adoptions and implementations at the organization and incorporating the elements of flexibility, adaptive, innovative, responsive and dynamic instructional design that fits with the mental model, expectations and requirements of different type of learners.

#### LIMITATIONS

This research was limited to only to those academicians who had experience and used blended learning in their teaching method. It was recommended that the results from this study should be replicated at other higher learning institutions and being used towards the development of mobile teaching e-Inclusion value chain framework. In this study only focus on academicians.

#### RECOMMENDATIONS

In future research should include other stakeholder such as students and administrators as the respondents. Future research may involve empirical investigations to compare the adoptions of blended learning between science streams and non-science streams. Future research involves the development of mobile teaching e-Inclusion value chain framework.

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