

**Assessing the Acceptance of UiTM Pahang Users towards
the Implementation of Blended Learning Approach**

¹Azniza Ahmad Zaini, ²Haslinda Noradzan,

³Fazlin Marini Hussain & ⁴Roger Canda

¹Faculty of Business Management, Universiti Teknologi MARA Pahang,
26400 Bandar Tun Razak Jengka, Pahang, Malaysia

^{2, 3, 4}Faculty of Computer and Mathematical Sciences,
Universiti Teknologi MARA Pahang,
26400 Bandar Tun Razak Jengka, Pahang, Malaysia

e-mail: ¹nizazaini@pahang.uitm.edu.my,

²haslindanoradzan@pahang.uitm.edu.my,

³fazlinmarini@pahang.uitm.edu.my, ⁴rogercanda@pahang.uitm.edu.my

Abstract This paper discusses the initial investigation on the factors that influence the acceptance of both lecturers and students of the implementation of Blended Learning (BL) approach in Universiti Teknologi MARA (UiTM) Pahang. Blended learning, also known as semi-attendance based learning, offers flexibility of learning and utilizes the technologies in education. About 30% of the total courses of the various programs in UiTM need to be conducted online by June 2013. However, some of the lecturers were afraid that the students would refuse to participate in online learning and some of them lack IT skills so that they might need extra time to prepare their lecture notes online. Self-administered questionnaires were distributed to 86 final year students of Diploma in Computer Science registered for the programming course and 67 students of Diploma in Banking registered for the Malaysian economy course during the June-October 2013 Semester to assess their acceptance of the new approach. At the same time, 53 lecturers from various faculties at UiTM Pahang were also involved in the survey using convenience sampling method and the data were then analysed using descriptive statistics. The users' perception on i-Learn Portal usage for the BL method, as well as the benefits of implementing Blended Learning approach in their teaching and learning process were also identified. The findings reveal that the students could adapt with the BL approach since most of the students were computer and Internet literate and were gradually adapting to the mixed approaches in

assessments. Most of the students also agreed that the implementation of Blended Learning should be continued corresponding with the development of technology, but there were some suggestions on the improvement of the Learning Management System (LMS) portal to achieve the benefits that Blended Learning offers either in physical or virtual classrooms. On the other hand, the findings show that majority of the lecturers do accept the implementation of blended learning mode in their teaching and learning process although they are not ready to do so.

Keywords Blended Learning; LMS portal; users' perceptions; virtual classrooms.

1 Introduction

Face-to-face learning environment is being practiced from the early education generation until now. Nowadays, conducting the teaching and learning processes in universities has become a great challenge as time passes and the development of technologies takes place. Researches have been carried out in order to determine the significant changes in the education field with the technology development. From the studies, lots of methods have been introduced and are being used to deliver the teaching and learning processes such as traditional teaching, online teaching and mixing both teaching methods which is known as blended learning. Traditional education focuses on face-to-face lecture sessions and allows students to engage with the lecturers. On the other hand, the implementation of online learning with the presence of various web-based Learning Management Systems (LMS) enables the teaching and learning process to be conducted anytime and anywhere; and blended learning combines the traditional teaching and online learning. Blended learning, also known as, semi-attendance based learning offers flexibility of learning and utilizes technologies in education.

Blended learning was initiated in Universiti Teknologi MARA (UiTM) in 2009 and became compulsory for several courses. Envisioned by the Vice Chancellor of UiTM in his "Perutusan Tahun Baru Naib Canselor UiTM 2013", about 30% of the total courses offered by the various programs being conducted online by June 2013 needed to be achieved. Hence, i-Learn Centre (i-LeC) has collaborated with the Academic Affairs Division (UHEK) to provide information and conduct on-going training sessions to the lecturers

from time to time to guide them in applying blended learning in their teaching process so that the target could be reached. I-LeC operates under the Academic Affairs Division (HEA) and the centre is responsible for handling adaptation of e-learning in UiTM. At UiTM Pahang alone, 8 hands-on training sessions had been conducted from February 2013 to July 2013 by i-LeC and The Institute of Leadership and Quality Management (iLQAM) UiTM Pahang. In total, 195 lecturers from various faculties and learning centres attended the trainings. iLQAM was set up to provide a wide spectrum of training and professional development programmes for its academics. Thus, both i-LeC and iLQAM Pahang provided those trainings that were focused on utilizing the UiTM's Learning Management System (LMS) which is known as i-Learn portal for blended learning, and also to help the lecturers in preparing and encouraging them to adopt blended learning in their teaching process.

Beginning from March 2013, the i-Learn Center (i-LeC) of UiTM Malaysia has opened the registration for the lecturers to choose blended learning mode in their teaching process using the i-Learn Portal. i-Learn Portal enables the lecturers to do all the online activities and the participation of the students can be tracked using the "Monitoring Tools". The lecturers can choose to register their class as a blended learning course to start from the first week until the fourth week of every academic session. The portal also offers extended useful features that can support the blended learning approach such as "Group Forum" which is a platform to conduct discussion among lecturers and students and "Monitoring Group Forum" that allows the lecturers to observe their students' involvement in the online session. Other online activities that can be done using i-Learn Portal are distributing learning materials, online quizzes, online submission and grading of assessments.

However, from a random observation, some lecturers at UiTM Pahang were seen to be complaining about the implementation of blended learning. Some of the lecturers are afraid if the students refuse to participate in online learning using the i-Learn Portal. They are also afraid that they would need more time to prepare their lecture via online since they are committed with other non-academic works and they are also lacking in IT literacy.

Hence, in this study we would like to investigate the perceptions of both lecturers and students who are identified as users towards the implementation of blended learning approach since most

of the courses offered at UiTM Pahang have to be conducted using blended learning. The researchers also intended to assess the users' views on the i-Learn Portal as the platform for blended learning as well as the benefits that they found when teaching and learning sessions were being conducted using blended learning approach.

2 Literature Review

In general, the term blended learning can be defined as a learning system combining face-to-face instruction with technology mediated instruction (Bonk & Graham, 2006 as cited in So and Bonk, 2010). Singh (2003) also defined blended learning as a way of allowing the students to engage in learning outside of the classroom with synchronous tools, for instance, *Syype*, group chats, web-conferencing and the asynchronous tools like discussion boards, blogs and social networking sites.

Valiathan (2002) also described blended learning as a solution which combines a variety of different delivery methods, for instance, collaboration software, web-based courses and knowledge management practices. He also suggested that blended learning can be used to exhibit learning that combines lots of event-based activities, together with face-to-face classrooms, live e-learning and self-paced instruction (as cited in Ugur et al., 2009). Therefore, there is no standard definition of blended learning as different people define blended learning differently according to their teaching needs and the environment of the universities (Gutierrez, 2006).

The implementation of blended learning is widely practiced in higher education institutions nowadays. Some considerations should be analyzed such as aligning the operation of blended learning implementation with the institutions' goals and objectives to make sure the consistency of faculty development as well as the students learning support mechanisms (Moskal et al., 2013). As the blended learning approach is on the rise in UiTM, the academicians are suggested to embrace the traditional values of face-to face teaching and assimilate the best practices of online learning as proposed by Mironov et al. (2012). This was also supported by Mouzakis (2008) who proposed that ICT teachers in Greece who participated in the survey were satisfied with the knowledge they acquire from the training on blended learning and collaborative learning process. Most of the teachers also stated that they adapted well to the blended

learning process requirements as they had already begun to integrate the ICT in their daily teaching practice. Therefore, it can be seen that some benefits that could be gained when adopting blended learning are to encourage the learners to be engaged in advanced interactive experiences in the classroom and at the same time provide learners with multimedia-rich content at anytime and anywhere as long as they have internet access. Moreover, the approach allows the instructors and learners to have more flexibility in delivering and receiving knowledge.

The students would also gain lots of benefits when they became part of the blended learning users as according to a study conducted by Akkoyunlu and Soylu (2006), the results showed that the students would achieve more in their academics and would develop more positive views towards blended learning when they participated in the online discussion forums. Besides, they found that both the face-to-face lectures and the online assignments contributed to the learning process. This was also supported by Sauers and Walker (2004) that students who participated in a blended course perceived their course system as more beneficial than the traditional face-to-face lectures (as cited in Adas and Shmais, 2011).

Nevertheless, there are always challenges to something new like blended learning as blended learning courses are unfamiliar territory for many professors and instructors who are responsible for the learning and development in their traditional courses (Gutierrez, 2006). One of the worst practices at the higher institution was some of the instructors mistreat the students when they do not reach the expected final learning outcome. On the other hand, students also gave negative feedbacks on the implementation of blended learning approach when most of the teachers tend to assign more work in the virtual part than in the attending part which means an overload of online activities for students (Cabero, Llorente & Puentes, 2010). This is probably because of lack of teachers' experience in working in these environments. Thus, training and recruitment of teachers are necessary and spaces (virtual or attending) should be created for the exchange and discussion about the starting up by the teachers. As such, teacher training actions need to be established before the beginning of the experience. The teachers also need to improve their technology skills in using the Internet as a medium to deliver the content of the course. A study at Korea University done by Lee and Lehto (2013) about user acceptance of YouTube as a learning tools suggests that it can be used as one of augmented tools to support

learning and instructions but this depends on the context of the usefulness and users' perceptions. Poutanen et al. (2011) also suggested that new skills from both students and teachers were required in order to change the traditional mindset of blended learning from technology- and teaching-oriented perspective to co-learning, co-creation and other self-organizing behaviour. Both students and teachers need to enhance their skills in the usage of technological tools and basic team-member skills.

3 Methodology

The purpose of this study is to assess the users' acceptance on the implementation of blended learning approach. Closed questionnaire items such as the demographic profile of the respondents, users' view on blended learning approach, and online environment to support the online teaching and learning were addressed. The measurements for close - ended questionnaire were structured using the 5-point Likert scale; according to the degree of agreements, 5 for strongly agree and 1 for strongly disagree. At the same time, the respondents were also allowed to give their views and recommendations in the open-ended question.

The data used were first drawn from a sample of students at UiTM Pahang from two different faculties who had already registered for blended learning approach during the June – October 2013 semester. The students were chosen because they were taught by the authors and were suitable to become the case studies. The population was all Part 4 students from the Diploma in Banking (71 students) who enrolled in the Malaysian Economy course and all Part 5 students from the Diploma in Computer Science (102 students) who enrolled in the Programming course. A self-administered questionnaire was distributed to a random sample of 153 students from those programmes. Students were asked to complete the questionnaire during the class period in order to receive a high response rate. The response rate was 88.44%.

Next, the data were also gathered from a sample of lecturers from various faculties at UiTM Pahang who had attended training course on blended learning beginning from February to July 2013 conducted by i-Learn Centre and the iLQAM, UiTM Pahang. The total population was 195 lecturers and we calculated 30% of them as our convenience target respondents. The respondents were asked to

complete and return the questionnaire on the date the survey was distributed so that a high response rate could be obtained by the researchers. Out of 60 respondents, 53 lecturers returned the questionnaire and the response rate was 88.3%.

The data obtained from the questionnaire were analyzed using the Statistical Package for Social Sciences (SPSS), Version 21. Descriptive analyses such as mean and percentages were used to investigate the factors that influence the acceptance of both lecturers and students towards the implementation of BL approach in UiTM Pahang; to identify the perceptions from both lecturers and students who are identified as users towards the implementation of blended learning; to assess the users' views on i-Learn portal as the platform for blended learning and to discover the benefits they found when teaching and learning sessions were being conducted using BL approach.

4 Findings

4.1 Demographic Profiles

4.1.1 Students' demographic profile

Table 1: Descriptive Statistics of Students' Demographic Profile

Measure	Items	Frequency	Percent
Programme	CS110 (FSKM)	86	56.21
	BM112 (FPP)	67	43.79
Gender	Female	92	60.13
	Male	61	39.87
Have Internet at home	Yes	110	71.9
	No	43	28.1

Table 1 represents the descriptive statistics of the respondents' profile. This table indicates that 92 (60.13%) female and 61 (39.87%) male students completed the questionnaire. 86 (56.21%) respondents were identified as students from the Diploma in Computer Science (CS110) and another 67 (43.79%) respondents were Diploma in Banking (BM112) students in UiTM Pahang. Out of 153 students, 71.9% of them claimed that they did have internet at home. It shows

that most of the students were easily accessible to the internet that could support the implementation of the blended learning approach.

4.1.2 Lecturers' demographic profile

Table 2: Lecturers' Demographic Profiles

Measure	Items	Frequency	Percent
Faculty	FSKM	13	24.53
	FPP	10	18.87
	FSR	9	16.98
	FSG	5	9.43
	FKA	1	1.89
	FPN	8	15.09
	APB	5	9.43
	ACIS	2	3.77
Year of services	Less than 2 years	9	16.98
	2 to 5 years	30	56.60
	5 to 10 years	5	9.43
	More than 10 years	9	16.98
Gender	Female	37	69.81
	Male	16	30.19
Have Internet at home	Yes	43	81.13
	No	10	18.87
Frequently Internet accessibility	Office/faculty	36	67.92
	Home	17	32.08
Blended learning registration	Yes	14	26.42
	No	39	73.58
Attend blended learning hands-on training	Yes	41	77.36
	No	12	22.64

Table 2 summarizes the demographic profiles of the respondents. A total of 53 respondents participated in this survey and the number of female respondents was higher than the male respondents with 37(69.81%) to 16(30.19%) respectively. From the findings, majority of the respondents were from the Faculty of Computer Science and Mathematics with 13 lecturers (24.53%) and followed by 10 (18.87%) lecturers from the Faculty of Business Management,. Majority of the

lecturers had been working at UiTM Pahang between 2 and 5 years (56.6%), followed by those who had worked for less than 2 years and also more than 10 years at UiTM Pahang that have the same percentage of 16.98% respectively.

It was found that 43(81.13%) respondents did have internet at home and 67.92% of them frequently accessed the internet at their office or faculty. Only 17(32.08%) respondents stated that they were frequently connected to the internet at home. From the survey, it was found that majority of the respondents (77.36%) had attended the hands-on training on blended learning but only 14 out of 53 respondents registered for blended learning mode during the June-October 2013 semester.

4.2 Users' View towards the Implementation of Blended Learning(BL) Approach

4.2.1 Students' view

Table 3 shows the students' perception towards the implementation of blended learning approach in their learning at the university. The findings show that 76.47% students agreed that they can reduce their printing cost when blended learning approach takes place. It can be seen that this item also has the highest mean score (4.03) compared to other items. Majority of the students also perceived that blended learning supports ideas and experience sharing among students (mean score = 3.99) and they were always being guided by the lecturers (mean score = 3.94) when using blended learning. Furthermore, they claimed that they could prepare their class session very well as they could download the notes and do their assessment online easily from i-Learn portal (mean score = 3.90).

Nonetheless, the students felt that their study workload had not increased when they adopt blended learning (mean score = 2.24). Probably the students are able to adapt with the learning styles via online and traditional face-to-face methods. The students also claimed that they were not sure whether the blended learning approach would be more effective than the traditional approach (full time face-to-face) with a mean score of 3.39.

Table 3: Students' View towards the Implementation of Blended Learning (BL) Approach

Items	Percentage					Mean
	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	
BL approach encourages self-learning to students	0.65	9.80	13.73	55.56	18.95	3.83
BL helped students learn better	0.65	9.15	23.53	49.67	16.99	3.73
BL increases opportunity for discussion amongst students and lecturers	0.65	6.54	24.84	50.33	16.99	3.77
BL provide flexibility to students in terms of their needs (enabling students to study when they choose to)	0.65	5.23	24.84	54.25	14.38	3.77
BL helps students to prepare well for class sessions(eg: download notes and assessments)	0.65	3.92	22.22	50.98	22.22	3.90
BL increases the study workload for students	17.65	46.41	28.76	5.23	0.65	2.24
BL increases interaction levels between individual students and the lecturer outside class	0.65	5.88	28.76	46.41	18.30	3.76
BL support close relationship between students and lecturer	0.65	6.54	33.33	41.18	18.30	3.70
BL supports ideas and experience sharing amongst students	0.65	7.19	11.76	52.29	27.45	3.99
Online Quizzes/tests easier to implement	3.27	7.19	16.34	46.41	26.80	3.86
BL decreases costs for individual students (printing)	1.96	3.92	17.65	42.48	33.99	4.03
The lecturer helped to guide when using BL	1.31	2.61	20.26	50.98	23.53	3.94
Students received enough online feedback from lecturer	0.00	3.92	26.80	49.02	20.26	3.86

Table 3 (continued): Students' View towards the Implementation of Blended Learning (BL) Approach

Items	Percentage					Mean
	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	
BL approach would be more effective than traditional approach (full time face-to-face)	2.61	7.84	28.10	33.33	11.76	3.39
BL approach encourages students to participate in the discussion(reduce inhibition)	2.61	5.88	27.45	46.41	17.65	3.71
BL approach supports flexibility of learning styles for students	3.27	4.58	24.84	45.75	21.57	3.78

Based on earlier discussions, Table 4 summarizes the students' view on the implementation of blended learning approach. All students do accept blended learning approach and there is no difference between CS110 and BM112 students in adopting the blended learning approach in their learning at the university.

Table 4: Students' View on Blended Learning (BL) Approach (CS110 vs BM112)

Programme	N	Mean
CS110	86	3.72
BM112	67	3.68

4.2.2 Lecturers' view

Based on Table 5, all lecturers responded favourably to all the items on the survey, indicating the implementation of blended learning mode is acceptable (Mean>3.50). Majority of the lecturers (Mean = 4.13) agreed that blended learning did provide flexibility to lecturers in conducting the course (anywhere and anytime); printing costs on teaching materials could be decreased (Mean=4.11); offers great potential in solving the problem of insufficient classroom and lab (Mean=4.06); helps lecturers and students to prepare well for class sessions such as download notes and assessments(Mean=4.06); and that the i-Learn centre provided sufficient information and training

on blended learning (Mean=4.06). Interestingly, most of the lecturers did not agree that the blended learning approach could increase their workload (M=2.66).

Table 5: Mean Value for Lecturers' View on Blended Learning Approach

Items	Percentage					Mean
	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	
Sufficient information and training on BL provided by iLearn Centre	0.00	0.00	16.98	60.38	22.64	4.06
BL approach helps students learn better	0.00	5.66	20.75	62.26	11.32	3.79
BL provides flexibility to lecturers in conducting the course (anywhere and anytime)	0.00	1.89	5.66	69.81	22.64	4.13
BL offers great potential in solving the problem of insufficient classroom and lab	1.89	3.77	11.32	52.83	30.19	4.06
BL helps lecturers and students to prepare well for class sessions (eg: download notes and assessments)	0.00	1.89	15.09	58.49	24.53	4.06
BL increases the workload for lecturers	18.87	16.98	45.28	16.98	1.89	2.66
BL increases interaction levels between individual students and the lecturer outside class	1.89	9.43	18.87	54.72	15.09	3.72
BL supports cooperative learning amongst students	0.00	1.89	22.64	64.15	11.32	3.85
BL supports ideas and experience sharing amongst students	0.00	3.77	24.53	60.38	11.32	3.79

Table 5 (continued): Mean Value for Lecturers' View on Blended Learning Approach

Items	Percentage					Mean
	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	
Online quizzes/tests easier to conduct	3.77	15.09	15.09	49.06	16.98	3.60
BL decreases costs disseminating teaching materials (printing)	1.89	1.89	9.43	56.60	30.19	4.11
BL offers variety of learning resources for students	0.00	1.89	9.43	73.58	15.09	4.02
Lecturer can obtain online responses/participations from students	0.00	5.66	11.32	71.70	11.32	3.89
BL approach is more effective than traditional approach (full time face-to-face)	1.89	9.43	41.51	33.96	13.21	3.47
BL approach encourages students to participate in the discussion(reduce inhibition)	1.89	11.32	28.30	54.72	3.77	3.47
BL helps the lecturers to respond to individual learning needs	1.89	7.55	22.64	62.26	5.66	3.62
BL approach enabling lecturers to understand different learning styles for students	0.00	1.89	32.08	56.60	9.43	3.74
BL approach provides platform for the lecturers to explore their creativity of delivering teaching process.	0.00	1.89	15.09	69.81	13.21	3.94

4.3 Users' View on i-Learn Portal as Platform for Blended Learning

4.3.1 Students' view

Table 6: Students' View on i-Learn Portal as Platform for Blended Learning

Items	Percentage					Mean
	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	
i-Learn portal is user friendly portal	1.31	1.96	16.34	54.90	19.61	3.96
i-Learn portal was easy to access	1.31	1.96	18.95	54.25	22.88	3.96
Notes in iLearn portal help in teaching and learning process	0.65	1.96	16.34	52.94	27.45	4.05
No technical problems when accessing the i-Learn portal	4.58	16.34	41.83	28.10	8.50	3.20
The instructions provided on the i-Learn portal were easy to follow	1.31	2.61	24.18	56.21	15.03	3.82
Functionalities (group forum, course materials, etc) provided on the i-Learn portal is sufficient for BL	0.00	3.27	22.88	53.59	19.61	3.90
Monitoring tools in i-Learn portal helps in tracking the participations of students	1.31	0.65	26.14	54.25	16.99	3.86

Table 6 indicates the students' view on i-Learn portal as the platform for blended learning in UiTM. Majority of the students (80.39%) responded that the notes in i-Learn portal were beneficial to them in the teaching and learning process. This is probably because the students who use i-Learn portal can easily get the notes needed from any of the UiTM campuses as long as they registered for the same courses in the portal. The students also found that i-Learn portal is user-friendly and easily to access. On the other hand, most students reported that they were uncertain whether they faced any technical problems when accessing i-Learn portal (mean score = 3.20). The implementation of blended learning could not be done smoothly if technical problems always occur especially at the beginning of the

semester as it would disrupt the courses registration for students. However, all students perceived that i-Learn portal is beneficial to be used as the platform for blended learning as seen in Table 7.

Table 7: Students' View on i-Learn Portal as Platform for Blended Learning

Programme	N	Mean
CS110	86	3.91
BM112	66	3.71

4.3.2 Lecturers' view

Table 8 indicates the lecturers' view on using i-Learn portal as a platform for blended learning mode. The percentages of the lecturers agreeing that the notes on i-Learn portal were useful in supporting their teaching and learning process, i-Learn portal was easy to access and the instructions provided on the portal were easy to follow were 84.9% (Mean = 4.02), 83.01% (Mean = 3.83) and 81.13% (Mean = 3.81) respectively. Nonetheless, the response rate with respect to i-Learn portal is user-friendly; the system administrations do provide solutions to problems faced by lecturers regarding i-Learn portal usage; and monitoring tools in i-Learn portal does help the lecturers to track the students' participation was a bit lower with the percentages of 79.24% (Mean = 3.75), 66.04% (Mean = 3.72) and 64.15% (Mean = 3.70) respectively. Furthermore, the percentages of respondents who are uncertain whether the functionalities provided on i-Learn portal are sufficient for blended learning mode and no technical problems happens when accessing the i-Learn portal were 54.71% and 37.74% respectively.

Table 8: Mean Value for Lecturers' View on i-Learn Portal as Platform for Blended Learning

Items	Percentage					Mean
	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	
i-Learn portal is user friendly portal	0.00	9.43	11.32	73.58	5.66	3.75
i-Learn portal was easy to access	0.00	9.43	7.55	73.58	9.43	3.83
Notes in iLearn portal help in teaching and learning process	0.00	0.00	15.09	67.92	16.98	4.02
No technical problems when accessing the i-Learn portal	3.77	20.75	37.74	32.08	5.66	3.15
The instructions provided on the i-Learn portal were easy to follow	0.00	3.77	15.09	77.36	3.77	3.81
The system admins (IT officers /iLearn trainers) provide solutions to problems faced by lecturers regarding iLearn portal usage	0.00	0.00	33.96	60.38	5.66	3.72
Functionalities (group forum, course materials, etc) provided on the i-Learn portal is sufficient for BL	0.00	3.77	41.51	50.94	3.77	3.55
Monitoring tools in i-Learn portal helps in tracking the participations of students	0.00	1.89	33.96	56.60	7.55	3.70

5 Conclusion

From the earlier findings and discussions, it can be concluded that all users in UiTM Pahang perceive that the implementation of blended learning approach is beneficial to them. From the recommendations given by the students, 60.8% of them preferred to have a balanced mixture of online learning and face-to-face learning time as mostly

practised in UiTM at the moment, followed by 20 (13.1%) students who would like to spend more time online and have less face-to-face lecture sessions, 18 (11.8%) students preferred traditional teaching with no online learning and only 15 (9.8%) students preferred to have 100% online for the learning and teaching process. Surprisingly, the Diploma in Banking students preferred to have more online learning and have less face-to-face lecture session compared to the Diploma in Computer Science, probably because they want to experience different learning style.

Besides that, 46(86.79%) lecturers preferred a balanced combination of online learning and face-to-face lecture time, followed by 5(9.43%) lecturers who preferred to spend more time online and have less face-to-face lecture sessions and another 2 (3.77%) lecturers preferred the traditional teaching methods that involve only face-to-face interaction with the students. However, none of the lecturers preferred 100% online in the learning and teaching process. It shows that most of the lecturers do accept the implementation of blended learning approach although some of them are not ready to do so. Some of the lecturers did not register for blended learning mode during the June-October 2013 semester although they had attended the training course on blended learning. In contrast, a few of the lecturers were also found to have registered for blended learning although they never attended any blended learning training course.

It is believed that the university should provide facilities such as computer and sufficient internet connection for the students and lecturers to support blended learning activities. The blended learning activities will be disrupted if access to the computer network is not available most of the time as the students and lecturers need limitless access and flexible time to support their online teaching and learning activities. Previous research study conducted by So and Brush (2008) stated that one of the most critical factors that affect students' acceptance is the communication medium. It is important to have a reliable communication medium for development and to deliver conducive online instructions and offer collaborative environment. In addition to that, some challenges such as lack of technological and computer skills; lack of policy; lack of faculty support; large class size; and inadequate technological resources could also restrict the adoption of blended learning among the academic staff at a developing university (Tshabalala et al., 2013). Nevertheless, the technical problems that sometimes occur at the beginning of the

semester should be rectified in order to support successful implementation of blended learning in UiTM. It is also recommended that i-LeC should prepare some enhancement in the i-Learn portal in terms of the functionality and the reliability of the system as the number of users is growing and the system should be able to handle massive users simultaneously. Some students found difficulties in fulfilling the online assessment such as online quizzes and tests that have been conducted using the portal due to technical problems.

The blended learning approach would be more challenging to the lecturers if the students show more interest on online learning because creativity and commitment from the lecturers are required to fully utilize the usage of the i-Learn portal. It is very essential for the lecturers to have different teaching styles in order to attract and encourage their students to do online learning. Some of the lecturers suggested that the i-Learn portal should allow the lecturers to customize the interface in accordance with their preferences such as preferred theme, font type, and colour. The students and lecturers also suggested that extended features should be given such as email notifications that will be sent automatically to their mobile devices like smartphones, tablets and iPad. These features will help them know immediately if their students have responded to their discussion forum on i-Learn portal or when the students have submitted their assignments via i-Learn portal. At the same time, the students will find that the blended learning approach is not burdensome to them as they will be notified via emails when their lecturers upload the assignment or online quizzes, unless they are told to do so earlier during their face-to-face lecture session.

Ongoing hands-on trainings should also be regularly conducted to update the lecturers with the latest information on blended learning implementation in UiTM and the necessary activities that can be done using the existing features in the i-Learn portal. Trainings on the Web 2.0's various applications in education will significantly help the lecturers to explore their creativity in delivering lessons by utilizing information technology through internet connection.

Further study related to blended learning should be extended in the future in order to determine the students' performance in their quizzes or test as a result of using blended learning and to look at how both lecturers and students really make use of blended learning in their teaching and learning process. It is also suggested to have

larger sample size in the study because the number of blended learning users in UiTM Pahang will increase from time to time.

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