INTERNATIONAL JOURNAL ON
E-LEARNING
AND
HIGHER EDUCATION
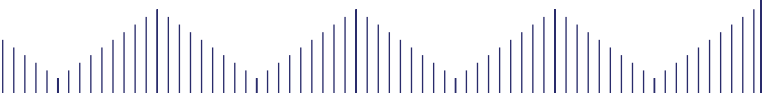
A SURVEY ON ONLINE LEARNING SESSION OF THE BLENDED LEARNING MODE AMONG LECTURERS

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Abstract : Graduates who are deemed to be knowledgeable, marketable, equipped with problem solving and critical thinking skills are what most universities aspire to produce. This kind of graduates are considered an asset to any organisation and are in constant demand because they are equipped with hard skills as well as soft skills. Thus, lecturers are constantly striving to find effective teaching strategies that encourage meaningful learning among their learners. In order to make the process of learning more efficient, interesting and engaging for the learners a majority of lecturers are constantly aiming to innovate and thus improve their teaching techniques. One of their teaching strategies is online learning. This study investigates the culture of online learning session of the blended learning mode among the lecturers in Diploma Science programme. Quantitative research approach was used for data collection and analysis in the study. Findings from the study shows the lecturers use various medium to conduct online learning where the most popular is i-Learn while the least is Facebook. The most common activities during online session was uploading the e-content. 70% of lecturers spend between six to 10 hours of their working time to fulfils the one-hour online session for every week and most of the lecturers spends two weeks to finish the evaluation of student's work. Student engagement towards online learning are good and lecturers are agreed that this method can help

student to improve their critical thinking skill compared to communication skill in order to achieve the 4C's skills. Research findings will give input to lecturers in T&L process to be more innovative and creative in order to help the learners achieving those required knowledge and skills.

Keywords: blended learning, online learning, 4C's learning skills

INTRODUCTION

21st Century Learning has become an increasingly important issue in the education as it is seen to meet the needs of nowadays learning, as well as bring new changes in the education world. 21st Century Learning emphasizes student-centred learning processes where they have to acquire some skills such as communication, collaboration, critical thinking, creativity and the application of pure and ethical values. Therefore, 21st Century Learning has made paradigm shift in learning that encompasses curriculum, media, and technology. Good learning media translates the difficult concepts to easier understanding. Therefore, Diploma in Science program does not exempt from applying the 21st Century Learning especially during the curriculum delivery. One of the elements applied are blended learning (BL).

In the traditional approach, a teacher delivers the content by repetition, making learner say or write the same thing repeatedly which make class less interesting. This model was teacher-centred which focus on rote learning where it requires students to memorize a large amount of information in order to expand their knowledge. Teachers then assess student knowledge by using tests and quizzes at the end of the unit or year in order to identify students' learning level (Halah & McGuire, 2015). Today, traditional lecture-based classroom needs to be changed to empower the education in 21st century learning. In 21st century learning, the teacher-centred learning has change to student-centred learning. The learner needs to acquire the 4C's skills which are communication, collaboration, critical thinking, and creativity in their daily life (Rusdin, 2018). Nowadays, the lecturer is not only delivering the knowledge in the classroom, but they also need to facilitate the learners to acquire that 4C's skills. The use of podcasts, audio and video blogs and online learning all play into how education is moving and is significant in current learning activities.

To adopt this changes, Diploma in Science programme was not exempted from applying the 21st Century Learning especially during the curriculum delivery. One of the elements applied was distance learning or blended learning (BL). According to the Ministry of Education Malaysia, blended learning is defined as "A mix of face to face and online learning mode where between 30% - 80% of the course content and activities are delivered online" (i-learn Centre HEA). A typical application of BL in the content delivery would be a combination of face-to-face instruction along with a technology-based material. For example, a lecturer can begin a course face-to-face with a well-structured lesson in the classroom then, students will be engaged with online tutorial to continue the learning processes. Integration between traditional face-to-face instruction with the university Learning Management System (LMS) also benefits the BL. During the programme curriculum review done by year 2017, almost 50% of the courses offered by the programme use BL as their teaching and learning (T&L) method. Face-to-face tutorial session had been switched to online tutorial. Each of the courses allocate about one hour every week for the online tutorial activity. In conjunction with the current situation, this study investigates the implementation of BL among Diploma Science programme lecturers. The objectives of this studies are to investigate the preferred online medium and the activities perform by the lecturer during online session. Other than that, this study is to obtain the lecturer's perspective on learner performance on 4C's skills.

METHODOLOGY

This study applies descriptive survey using cross sectional research design. Data were gathered through a set of structured questionnaires distributed to the lecturers. The sample was selected from 64 lecturers of Faculty Applied Science, UiTM Perak Branch Tapah Campus. This research utilised the random sampling technique, which refers to a sampling procedure whereby a group of subjects is randomly selected from any one population as the studied respondents.

Quantitative approaches were used to analyse and evaluate the findings. These approaches involved the analysis of data and information through the perception survey method. Quantitative data which were obtained through likert scale type questionnaire were analysed using the Statistical Package for

the Social Sciences (SPSS) software. In order to achieve research objectives, the data were analysed using descriptive statistics encompassing frequency distribution and percentages presented in the form of tables.

The value of Cronbach's alpha for all the item is 0.759, value Cronbach alfa > 0.7 is an ideal value which means, this research instrument is appropriate and reliable.

RESULTS

The respondent consist of 16.7% male lecturers and 83.3% female lecturers from various area of science courses (28.6% biology, 42.9% chemistry and 28.6% physics). Respondent grades ranged from DM45 to DM52 where 31% of them had less than five years teaching experience, 47.6% with five to 10 years teaching experience and 21.4% had 10 to 15 years teaching experience.

Table 1. Mediums used for online learning

	i-Learn	WhatsApp	Edmodo	MOOC	Facebook
Mean	2.90	2.67	1.31	1.19	1.12
N	42	42	42	42	42
Std. Deviation	.297	.650	.604	.505	.453

Mediums used for online learning has been tabulated in Table 1. i-Learn (M = 2.9) is the most preferred medium among the lecturer follow by WhatsApp (M = 2.67), Edmodo (M = 1.31), MOOC (M = 1.19) and the least is Facebook (M = 1.12).

Table 2. Activities performed for online learning in a semester period

	Upload learning material	Assignment	Discussion	Quiz	Forum	Upload Video
Mean	3.69	3.24	2.93	2.93	2.71	2.62
N	42	42	42	42	42	42
Std. Deviation	1.137	1.322	1.276	1.276	1.470	1.324

Table 2 shows that, upload learning materials are the most frequent activities during online with mean value

3.69 followed by assignment (M = 3.24), quiz and discussion (M = 2.93), forum (M = 2.71) and the least is upload the video (M = 2.62).

Table 3. Preparation duration for online learning

	Frequency	Percent	Valid Percent	Cumulative Percent
<1 hour	3	7.1	7.1	7.1
1-3 hour	19	45.2	45.2	52.4
3-5 hour	9	21.4	21.4	73.8
>5 hours	11	26.2	26.2	100.0
Total	42	100.0	100.0	

From Table 3, it was found that 45.2% of the lecturers are spending one to three hours for preparation and only 7.1% of lecturers spend less than one hour. Yet, there are 26.2% lecturers taking more than five hours to prepare for the online learning.

Table 4. Duration for lecturers to responds to the online forum or discussion

	Frequency	Percent	Valid Percent	Cumulative Percent
<1 hour	4	9.5	9.5	9.5
1-3 hour	17	40.5	40.5	50.0
3-5 hour	13	31.0	31.0	81.0
>5 hours	8	19.0	19.0	100.0
Total	42	100.0	100.0	

From Table 4 above, 40.5% of the lecturers need one to three hours to respond and only 9.5% lecturers need one hour to give a feedback. There are also 19% lecturers who spend more than five hours to reply to the students. Overall, there are 70% lecturers spend between six to 10 hours of their working time to fulfils the one-hour online session for every week.

Table 5. Duration for lecturers to evaluate assessment online

	Frequency	Percent	Valid Percent	Cumulative Percent
<1 week	3	7.1	7.1	7.1
1 week	14	33.3	33.3	40.5
2 weeks	17	40.5	40.5	81.0
3 weeks	5	11.9	11.9	92.9
>4 weeks	3	7.1	7.1	100.0
Total	42	100.0	100.0	

Meanwhile in Table 5, it shows 40.5% lecturers spends two weeks to finish the evaluation of student's work, while there are 7.1% lecturers who allocate less than one weeks and more than four weeks to evaluate the assessment online.

Table 6. Duration given to students to complete the assessment online

	Frequency	Percent	Valid Percent	Cumulative Percent
<1 week	2	4.8	4.8	4.8
1 week	23	54.8	54.8	59.5
2 weeks	14	33.3	33.3	92.9
3 weeks	2	4.8	4.8	97.6
>4 weeks	1	2.4	2.4	100.0
Total	42	100.0	100.0	

Table 6 shows one week is the most common period allocated by lecturers for student to finish their assessment which is 54.8%. While only 2.4% lecturers give more than 4 weeks to their students.

Table 7. Student engagement for online learning

	Frequency	Percent	Valid Percent	Cumulative Percent
0-20%	2	4.8	4.8	4.8
20-40%	1	2.4	2.4	7.1
40-60%	8	19.0	19.0	26.2
60-80%	12	28.6	28.6	54.8
80-100%	19	45.2	45.2	100.0
Total	42	100.0	100.0	

Table 7 shows the trend of student engagement for online learning. 45.2% lecturers choose 80-100% of their students are engaged with the online session. While only 2.4% lecturers saying that 20-40% students are participated.

Table 8. Lecturer's perspective on online learning towards learners 4C's skills outcome

	critical thinking	collaboration	creativity	communication
Mean	3.38	3.00	2.93	2.71
N	42	42	42	42
Std. Deviation	1.125	1.126	1.068	1.088

Table 8 indicate the mean value for lecturer's perspective on online learning towards learners 4C's skills outcome. It shows that, critical thinking is the most agreed skills that can be achieved through online learning followed by collaboration skill (M = 3.00), creativity (M = 2.93) and communication skill (M = 2.71).

DISCUSSIONS

The finding of the study shows that the Diploma in Science lecturers are applying various medium in carrying out the online learning. The most popular was i-Learn (LMS). i-Learn is the most preferred medium might because it is the system developed by university itself where every lecturer and student are automatically own an account and have an easy access to it. In addition, the system interface is suitable for learning activity. Lecturer can upload notes, create online quizzes, form a group forum and many more. While students are automatically joining a specific group based on the class registration, so it is easier and convenience for both parties. Whatsapp also is a popular medium used by lecturers. Interactions can become more instant since lecturers and students can respond quickly via Whatsapp. By using Whatsapp, lecturers and student can communicate anytime and everywhere (Sonia Gon and Alka Rawekar, 2017). In addition, the preference such as multimedia, group chat, unlimited message, no username and password are the great collaborative features which help the user to communicate (Bere, 2012). Facebook is the least popular medium to do online learning. It might because, Facebook is a platform for social life and by using Facebook for learning purposes, learning can be informal. Other than that, students can be distracted by other variety of post and it will make the learning process less effective. In addition, Facebook is lack of feature such as monitoring audience's progress to support the complete learning process. Liu (2010) have agreed that social media were not developed for learning purposes. While, another study support that by saying most lecturer use them for recreational purposes such as gaming, communication, and shaping online space for expression of personal identity (Crook, et al,. 2008).

The most common activities performed for online learning in a semester period was uploading a note for a course followed by assignment, discussion, quiz, forum and uploading video. It shows that the lecturer does have a great deal of creativity to fulfils the 14 learning weeks. Moreover, this might be due to the BL

implementation guideline where the lecturers need to comply certain criteria which are uploading seven e- contents, create three forums and provide two assessments online.

In term of duration, most of lecturers spend one to three hours for preparation and yet there are lecturers taking more than five hours to prepare for the online learning. While for giving feedback, most of the lecturers allocate one to three hours and do have lecturers who spend more than five hours to respond to the students. Overall, there are 70% lecturers spend between six to 10 hours of their working time to fulfils the one-hour online session for every week. Addition to that, most of lecturers spends two weeks to finish the evaluation of student's work. All this duration will increase if the lecturer assists more than one group and it will require more time if there are high number of student in a group. These findings show that, online learning is a time-consuming method. Lecturers have to allocate and manage well their time for preparation and giving responses to the students.

The most common duration given to students to complete the assessment online was within one to two weeks. This period is considered as enough while the other factors was taken into consideration. It includes, the ability of student to do self-learning (student centred learning), enough time for communicate and collaborate with each other in order to complete the given assessment.

Most of lectures agreed that their students are engaged during the online session. Student responds within the given time and participate in every forum or discussion created. Yet, there are some students who are not engage might be due to the technical issues which is particularly poor internet connection. Z.M. Zabidi et al. (2019) also reported that, poor internet connection may be the factor of less student engagement during online learning. In addition, student might take advantage from the online session by doing another assignment or activities because they do not have to see the lecturers. Besides that, less readiness on the topic discussed during the online session might leads to the poor engagement of students.

Based on the 4C's skills that need to be achieve by student, critical thinking is the most agreed skills that can be achieved through online learning followed by collaboration skill, creativity, and communication skill. This might be due to the nature of online learning where there is less verbal communication. With the assignment and discussion through online, it might help student in term of critical thinking skill because student they can do independent learning and directly it will improve the cognitive skill. Student might be

good by communication in written but verbally, they need another medium.

To achieved the 21st century 4C's skills among the learners, the lecturers need to be more creatives and innovative and willing to change their pedagogy method in T&L. With this motivation, UiTM Perak Branch has taken an initiative in establishing a hub for innovative teaching and learning (HITeL). This hub act as a catalyst to encourage university academicians to be innovative in designing flexible learning models and creating active learning as well as identifying the latest educational technology in fast-paced online learning.

CONCLUSIONS

This study has shown the culture of Diploma in Science program lecturer towards online learning for BL implementation. Overall, lecturers are using various medium for online learning which the most popular was i- learn and least popular was Facebook. The most common activity performed for online learning in a semester period was uploading a note for a course and the least is uploading video. Based on the duration, online learning consumed more time and it will increase based on the number of group and number of students per group. Student engagement towards online learning are good and lecturers are agreed that this method can help student to improve their critical thinking skill compared to communication skill. Lecturer have to be good in managing their time and be more innovative so that the teaching and learning processes through online can give bigger impact to students in order to help them achieving those required skills. Thus it is wise that educator only use a teaching and learning approach that will evoke the interest and enthusiasm of students. By using such T&L approach, the students will feel more excited and interested in the learning process and not feel intimidated or restricted.

REFERENCES

Bere A. (2012) A comparative study of student experiences of ubiquitous learning via mobile devices and learner management systems at a South African university. Proceedings of the 14th Annual Conference on World Wide Web Applications; Durban.

Crook, C., et al. (2008). Web 2.0 technologies for learning: the current landscape – opportunities, challenges and tensions. https://dera.ioe.ac.uk/1474/ Accessed 13 August 2019.

Halah Ahmed Alismail & Dr. Patrick McGuire (2015) 21st Century Standards and Curriculum: Current Research and Practice. Journal of Education and Practice Vol.6, No.6, 2015, 150-154.

i-learn Centre HEA, Blended Learning Guidelines For Administrative Personnal (2014) https://i- learn.uitm.edu.my/v2/wp-content/uploads/2014/06/Blended-Learning-Guideline-for-Administration-2014.pdf. Accessed 13 August 2019.

Liu, Y. (2010). Social media tools as a learning resource. Journal of Educational Technology Development and Exchange, 3(1), 101□ 114.

Pekeliling Akademik UiTM Bilangan 9 Tahun 2015, Garis Panduan Pelaksanaan Pembelajaran Teradun
(Blended Learning) Universiti Teknologi Mara.

Rusdin, N. M. (2018). Teachers' Readiness in Implementing 21st Century Learning. International Journal of Academic Research in Business and Social Sciences, 8(4), 1293–1306.

Sonia Gon and Alka Rawekar (2017). Effectivity of E-Learning through Whatsapp as a Teaching Learning Tool MVP Journal of Medical Sciences, 4(1), 19–25.

Z.M. Zabidi, A.N. Alias, F.F. Ramli, T. Mohd, N.F. Mohamad Razi, N.H. Baharun. (2019). Students Perspective Towards Contructive Alignment For Teaching Delivery And Assessment Conducted In Science Course.

EDULEARN19 - International Conference on Education and New Learning Technologies. 3302-3307.