

ACCEPTANCE OF MASSIVE ONLINE OPEN COURSE (MOOCs) MODULE AMONG STUDENTS: THE CASE OF UiTM PULAU PINANG

Farleen Azrina Zamberi

Librarian

Perpustakaan Tun Abdul Razak, Universiti Teknologi MARA Pulau Pinang

DOI: 10.24191/aclim.v1i2.11

Received: 26/11/2020/ Accepted: 21/01/2021 / Published Online: 30/11/2021

Abstract

Massive online open course (MOOCs) was initiated in Malaysia in 2015 by the Ministry of Education. MOOCs can be considered as the modern and extension of e-learning that allow massive students to learn in an open online course. The idea of MOOCs in higher education is to ensure the university courses are accessible by the students no matter where they are and at any time. MOOCs enable them to share and collaborate learning experiences. The purpose of this research is to survey which factors give high impact to the acceptance of MOOCs learning modules. This survey was conducted by distributing questionnaires to the students in Universiti Teknologi MARA Pulau Pinang, Permatang Pauh Campus. From the analysis, it can be concluded that social influences were the highest factor in influencing the acceptance compared to other factors which were perceived usefulness and perceived ease of use. It can be denied that the social influences can influence the students to use MOOCs in their learning process.

Keyword: Massive online open course, Learning modules, Students, MOOCs, Higher education, Technology acceptance, UiTM Pulau Pinang

1.0 Introduction

Massive Open Online Courses (MOOCs) is a modern e-learning education that was initiated in Malaysia during 2015. Massive open online courses (MOOCs) are large-format online classes developed as a platform for active learning by higher education institutions (McGovern, & Baruca, 2013). The idea of integrating the MOOCs in the higher education system is to ensure that a variety of learners have access worldwide and to offer students opportunities to participate in a joint learning experience (Hew & Cheung, 2014). MOOC also targets open lifelong education, which shows that participation in a course does not depend on previous academic skills. The content of a course is mainly provided through videos and forums and assessed via an online assessment that at the same time promotes teaching between peers.

Massive open online course is a new way of teaching and learning medium it is a great challenge to the conventional method which allow for an interactive and interesting teaching and learning. The emergence of massive open online courses (MOOCs) has great impact on the educational field, particularly in the distance education field. MOOCs differ from traditional online courses as students participating in the courses are massive – scaling up to thousands of students per course (Siemens, 2013).

The idea of using MOOC in higher learning is therefore also to establish online social and academic support that is usually common in a traditional classroom environment (Mendoza, Jung, & Kobayashi, 2017). Many have claimed MOOCs are becoming increasingly popular as disruptive technology and a

major threat to higher education institutions. Recently, MOOCs are becoming famous and well known among the students in higher education institutions. For institutions, MOOCs also offers a way to create meaning from learning analytics in various aspects such as monitoring, analysis, prediction, intervention, tutoring/mentoring, assessment, feedback, adaptation, personalization, recommendation, awareness and reflection (Yousef et al, 2015).

To date, MOOCs are categorized according to cMOOCs and xMOOCs. cMOOCs are founded based on the theory of connectivism while xMOOCs are laid on the behaviorist's theory (Daniel, 2012). Both types of MOOCs have their benefits and limitations.

In Malaysia, MOOCs is considered a new initiative by the government to boost the technological level of public and private universities (Norazah, Helmi, & Mohamad Amin, 2016). The Malaysian government strongly supports the use of MOOCs and sees them as a platform for integrating learning technologies and lifelong learning, while also leading a way towards new methods of teaching for undergraduate courses. Taylor's University, the first institution in Malaysia to launch MOOCs in 2013, takes the approach of providing MOOCs as mini classes for full-scope university programs.

Design of MOOCs in Malaysia is in parallel with a number of significant national plans such as the National Economic Model, Economic Transformation Program, the upcoming 11th Malaysia Plan (2016-2020) and Malaysian Education Blueprint for Higher Education (2015-2025).

According to the CEO and co-founder of OpenLearning, Brimo (2014), the MOOC initiative is part of the Ministry of Education's strategic plan to increase the quality and accessibility of higher education, thereby boosting the rankings of Malaysian universities in global surveys. Furthermore, the aim of the Ministry of Education is to transition out static lectures and to move forward towards more active learning.

MOOCs can be challenging if Malaysia do not take online learning seriously as a viable, large-scale education approach especially in this modern era. The characteristics of MOOCs which are "massive", "open" and "online" represents the three concepts of MOOCs which will determine either MOOCs have or can achieve considerable impact in Malaysia. Besides, Malaysia also needs to identify what are the best strategies to implement in making the education in higher education institutions better and fresh.

Hood, Littlejohn, and Milligan (2015), claim that not all participants have the motivation to successfully complete courses on MOOCs platforms and there is a high drop-out rate that questions the success of such platforms. In 2014, it has been reported that the drop-out rate of MOOCs is up to 90% and the motives vary from competence, difficulty in comprehension, lack of time, focus, and mentoring (Hew & Cheung, 2014).

It is important to understand students' motivation, perception, and experience towards the use of MOOCs. Therefore, some actions need to be taken to understand more about the factor that can influence the acceptance of MOOCs learning module towards higher education institutions.

2.0 Literature review

Tracing the MOOC history through formal training means that distance education is born over 150 years ago via the introduction of correspondence courses in the UK (Harte, 1986). These courses aimed at training a client in specific skills or tasks that cannot benefit from the University because of the economy, classes or geography. Distance education development has been conceptualized by understanding current concepts of the structure and evaluation of schooling; however, distance training has given possibilities and distinctive barriers (Katz, 2003). A subset of education research formed to focus on educational means and pedagogies for students, faculty and staff working outside geographic proximity. Distance education is a

structure made possible and reimagined by the technological advances of their time, starting in the 1860s with the industrialization of the printing press for curricular materials, the advent of a penny postal system for transmission of information and a societal lifestyle shift from rural homesteading to urban city centers. Baturay (2015), had listed several characteristics of MOOCs. They are: -

- Open - Participation in MOOCs is free and open to anyone who has access to the Internet. One might take more than one course and all the content is open to course takers. The work that is generated through the course (both by the facilitators and learners) is shared and available publicly.
- Participatory - The learning in MOOCs is enhanced by participation both in the creation and sharing of personal contributions and in the interactions with the contributions of others but the participation is voluntary.
- Distributed - MOOC is based on the connectivists approach; therefore, any knowledge should be distributed across a network of participants. Most of the course activity takes place in social learning environments, where participants interact with the material

Some theoretical reviews studied from the previous study regarding the factors that influence the acceptance of MOOCs learning module. Every theoretical model will be explained details as below: -

i. Exploring Students Acceptance of E-Learning Using Technology Acceptance Model in Jordanian Universities

This study was conducted by Amer Al-adwan, Ahmad Al-Adwan and Jo Smedley in 2013. This study provides an indicator of students' acceptance of e-learning as well as identifying the important factors that would contribute to its successful use.

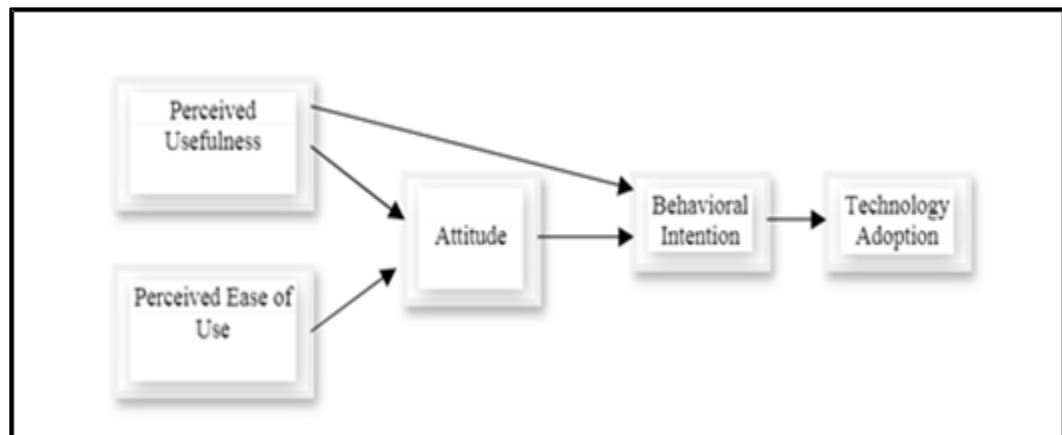
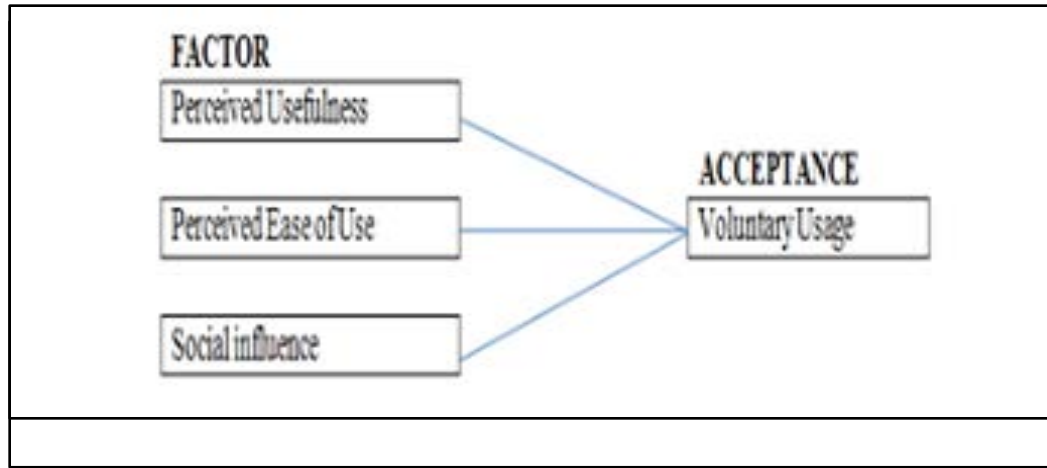


Figure 1-Theoretical Framework of Technology Adoption

The figure shows the relationship between the components of TAM. This indicates that perceived usefulness and perceived ease of use jointly predict the attitudes towards using technology. Perceived usefulness also influences the user's behavioral intention in using technology. Intention to use also determines the actual use of technology. The model posits that perceived ease of use is likely to influence perceived use, where the increase of perceived ease of use leads to improved performance. Consequently, perceived ease of use has a direct influence on perceived usefulness.

ii. Factors Affecting MOOCs Continuance Intention in Malaysia: A Proposed Conceptual Framework

This study was conducted by Mawaddah Mohamad and Mohd Kamarul Irwan Abdul Rahim in 2018. This study aims to identify the factors that may contribute to the students' intention to continue to use MOOCs in Malaysia study context. Synthesized in previous literature related to



online learning adoption, four factors have been identified to influence students to use MOOCs on a continuous basis such as usefulness, enjoyment, interactivity, and openness.

Figure 2-Theoretical Framework on Continuance Intention

The importance of usefulness as a factor that determines behavioral intention to use like an information system (IS) has been noted in prior studies (Davis, 1989; Bhattacharjee, 2001; Keong et al., 2012). Prior empirical studies in the context of e-learning have claimed a positive influence of usefulness on intention to use (Sumak et al., 2011; Sa et al., 2016). Liu et al. (2010) found that usefulness was the most influential variable in predicting the intention to use the web-based learning system. The study is in line with the findings from Joo and Choi (2016) and Ouyang et al. (2017), which also found continuous intention, is positively affected by usefulness.

3. Students' Acceptance of the TITAS MOOCs Learning Module in University Malaysia Sabah

The construct of perceived usefulness, perceived ease of use and social influence are determined as factors that can influence the acceptance of the TITAS MOOCs learning module among UMS students, while the voluntary usage construct is used as an indicator of the acceptance of the TITAS MOOCs learning module among UMS students. These variables from UTAUT and TAM are chosen due to their feasibility in measuring the acceptance of information technology and the TITAS. MOOCs learning module is seen as an IT innovation in education.

Figure 3-Theoretical Framework on Voluntary Usage

For this study, the relationship between dependent variable with independent variable will be shown in the hypothesis. The framework of this study as this follow: -

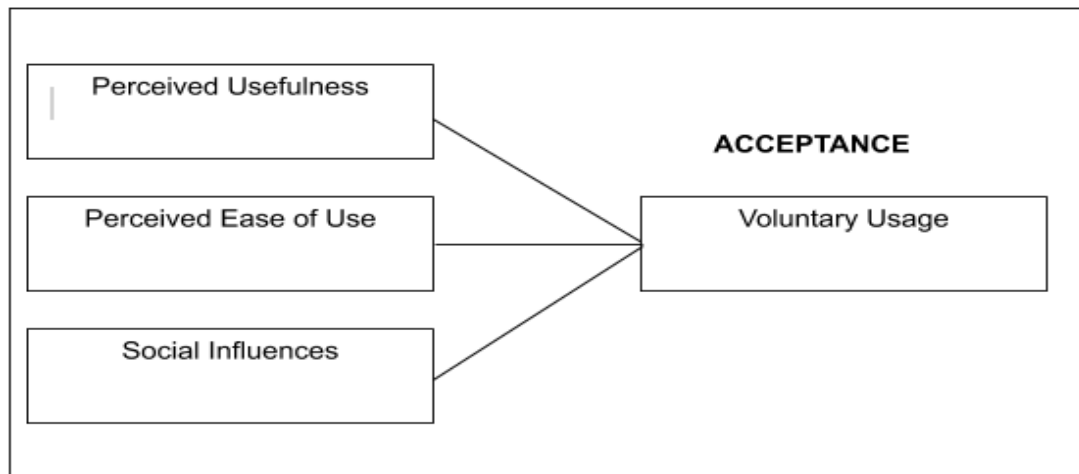


Figure 4- Theoretical Framework on Acceptance of MOOCs

3.0 Methodology

Based on the background of the study, the researcher would like to investigate the factors that influence the acceptance of MOOCs learning module towards students in Universiti Teknologi MARA Pulau Pinang, Permatang Pauh Campus. This research will be conducted among students in Universiti Teknologi MARA Pulau Pinang, Permatang Pauh Campus.

The potential of MOOCs to transform education has arrived through a combination of perceived necessity and the increased access to technology (Friedman, 2012; Koller, 2012). In many ways' MOOCs can be considered as distance learning with added peer support and social networking. The integration of online forums offers possibilities for the emergence of learning communities to share experiences and common interests, or communities of practice (Wenger, 1991) where more knowledgeable participants help others develop skills and knowledge. In UiTM, the I-Learn Center was established on the 1st December 2015. The center is in charge of adapting the UiTM e-learning. Initially, the center formally started its Learning Management System (LMS).

For this research, the population was among the students from Universiti Teknologi MARA Pulau Pinang, Permatang Pauh Campus. The students are from various faculties which are offer in Universiti Teknologi MARA Pulau Pinang, Permatang Pauh Campus and they are from undergraduates.

The analysis for this study was individual. The researcher had distributed the questionnaire to the respondents and they need to answer all the questions honestly. The numbers of the students were 5,414 and in order to define the correct sample size, the researcher uses the software named Raosoft and the proposed sample size is 359. Then the questionnaire had been collected and the data had been analyzed. The collected data is the findings for this research.

After examining the research objectives and research questions, the questionnaire was the best technique for this study in collecting data. Furthermore, this research has used the quantitative method and the survey method is the best form of quantitative method. The survey and questionnaires are the methods of directly collecting information on individuals' thoughts, opinions and beliefs.

There were several types of quantitative methods and as for this research, descriptive and correlational will be used. The descriptive method is to describe the current status of both independent and dependent variables. A correlational is used to determine the relationship between each independent variable and dependent variable. The degree of relationship is determined by the correlation coefficient. According to Apuke (2017), higher correlations (coefficients closer to +1.00 or -1.00) indicate stronger relationships.

Gorard, (2001) stated that data (numbers, percentages and measurable figures) can be calculated and conducted by a computer through the use of a statistical package for social science (SPSS) which save lot of energy and resources.

This research is focus on the factors that influence the acceptance of MOOCs learning module towards higher education institutions. The instrument use is questionnaire for gathering the input from the large sample and for easier analyzed. According to Venkatesh, Thong and Xu, (2012), Unified Theory of Acceptance and Use of Technology (UTAUT) are used for performance expectancy, effort expectancy, social influence, facilitating conditions, voluntary usage and behavioral intention. Meanwhile for factors that can influence the acceptance of a technology such as Perceived Ease of Use and the Perceived Usefulness will use Technology Acceptance Model (TAM) as suggested by Davis, (1989).

The questionnaire was developed from after the literature and objective of this research was determined. The format was based on Likert-type scale matrix with closed-ended questions which are designed to measure the intensity of the respondents' view. The five-point Likert scale was used for this questionnaire. Each item corresponding to the constructs was measured using five-point Likert scale, with answer choices ranging from "Strongly disagree (1)" to "Strongly agree (5)".

For this research, the survey instruments are divided into 3 sections. Section A contains demographic data, Section B contains the questions regarding dependent variables and lastly Section C contains the questions regarding independent variable. The Section B include the questions about the perceived of usefulness, perceived ease of use and social influence. Meanwhile the Section C includes the questions about independent variable which is the voluntary usage.

After the data had been collected, the data then analyzed by using software called Statistical Package for Social Sciences (SPSS). This software is use by various kind of researchers for complex statistical data analysis. The data were analyzed and presented in descriptive form, in the table and number.

The relationship between each research questions and research objectives can be identified through the results gained from the questionnaires. The acceptance of MOOCs learning modules can be influenced by several factors namely usefulness, ease of use and social influences. It is important to understand the hypotheses of the research as it showed the significance relationship between the research questions and research objectives. Perceived usefulness is also defined as the belief of users that new technologies can allow users to better understand or work effectively. Furthermore, it would enhance and increase the efficiency of the students. Thus, perceive usefulness is one of the important variables which suggest ways to help the learners recognize and enhance their learning persistence and the value of learning (Rahman, Adli, Raffei, & Ismail, 2020). Meanwhile, perceived ease of use considered as a standard level for individuals who believe that, when technology is used, they are free to make efforts.

4.0 Result

This section presents the results of descriptive analysis conducted on evaluation criteria for online learning relevancy based on the review framework. The identified evaluation criteria include the dimensions of individuals, learning and content. Respondents were asked about their perceptions of the

items contained in the assessment criteria or dimensions using the 5-point Likert scale, which is scale 1 for 'Strongly Disagree', scale 2 for 'Disagree', scale 3 for 'Neutral', scale 4 for 'Agree' and scale 5 for 'Strongly Agree'.

Descriptive analysis of perceived usefulness is shown in the table below. Respondents were asked their opinion about the usefulness of MOOCs learning module which consists of five (5) questions using the 5 Likert Scale.

	N	Mean	Std. Deviation
1. The MOOCs learning module is very beneficial.	359	3.94	.655
2. The MOOCs learning module helped increase my understanding about a particular topic.	359	3.77	.728
3. The MOOCs learning module provided the opportunity for me to think critically.	359	3.74	.707
4. The MOOCs learning module provided the opportunity for me to interact with friends from various background.	359	3.72	.763
5. The MOOCs learning module improved my ICT skills.	359	4.00	.727
Valid N (listwise)	359		

Table 1- Descriptive Analysis – Perceived Usefulness

Based on Table 1, four (4) items have an average more than 3.00 and one (1) item has average 4.00. The findings showed that the respondents agreed the MOOCs learning module is very beneficial to them (mean: 3.94) and help them to increase the understanding about a particular topic (mean: 3.77). The respondents believed that the MOOCs learning module also make them think critically (mean: 3.74) as well as provided an opportunity to interact with others from various background (mean: 3.72). By using the MOOCs learning module, the respondents agreed that it helped them in improving their ICT skills (mean: 4.00).

Based on this analysis, it can be seen that the MOOCs learning module helped the students in improving their ICT skills. Regarding to Fianu, Blewett, Ampong and Ofori (2018), computer self-efficiency influences students usage of MOOCs systems. It can be pointed out that the computer skills were very important for the students for the more effective usage of MOOCs platform. Thus, from the advice and taught from the lectures indirectly helped the students in improving their ICT skills. Fianu, Blewett, Ampong and Ofori (2018) also suggested that the lecturers can conduct some training in order to enable the students to use the MOOCs platform.

Descriptive analysis of perceived ease of use is shown in the table below. Respondents were asked their opinion about the conveniences of MOOCs learning module which consists of five (5) questions using the 5 Likert Scale.

	N	Mean	Std. Deviation
6. The MOOCs learning module is user friendly.	359	3.87	.716
7. The MOOCs learning module has clear instructions for the various learning activities	359	3.81	.746

8. The MOOCs learning module allows learning take place outside of a fixed class location.	35 9	3.95	.777
9. The MOOCs learning module allows learning to take place anytime at convenience of the student	35 9	3.99	.760
10. UiTM facilities assist me in having easy and fast access to the MOOCs learning module.	35 9	3.82	.764
Valid N (listwise)	35 9		

Table 2 -Descriptive Analysis – Ease of Use

Based on Table 2, all the items have an average above than 3.00. The respondents agreed that the MOOCs learning module is user friendly (mean: 3.87) because it has clear instruction for the various learning activities (mean: 3.81). In addition, the respondents also agreed that the MOOCs learning module allows the learning take place outside of the fixed class (mean: 3.95) and it allows the learning process to be done anytime and anywhere depending to the respondents (mean: 3.99). Besides, the UiTM facilities assist the respondents in having easy and fast access to the MOOCs learning module (mean: 3.82).

From the analysis, the highest mean belongs to MOOCs enable the students to learn anytime and anywhere depending to the respondents. This statement is also supported by the interviewee in the research made by Hakami (2018). He said that by MOOCs, the learners can watch the video lectures at any time, as they are available at all times as well as join and leaving a course requires just a few clicks.

Descriptive analysis of social influences is shown in the table below. Respondents were asked their opinion about the social influences towards MOOCs learning module which consists of five (5) questions using the 5 Likert Scale.

	N	Mean	Std. Deviation
11. My lecturer encourages me to use the MOOCs learning module.	35 9	3.74	.845
12. My lecturer uses the MOOCs learning module as an additional activity.	35 9	3.71	.841
13. My friends use the MOOCs learning module.	35 9	3.47	.914
14. My classmates help me through the use of the MOOCs learning module.	35 9	3.47	.902
15. My friends support my usage of the MOOCs learning module.	35 9	3.44	.943
Valid N (listwise)	35 9		

Table 3- Descriptive Analysis – Social Influences

Bases on Table 3, all the items had an average above than 3.00. The respondents admitted that their lecturers encourage them to use the MOOCs learning module (mean: 3.74). They also agreed that their lecturers also use MOOCs learning module as an additional activity (mean: 3.71). The result also showed that respondents' friends use the MOOCs learning module (mean: 3.47) as well as they help the respondents

to use the MOOCs learning module (mean 3.47). The respondents stated that their friends support them in using the MOOCs learning module (mean: 3.44).

The result showed the highest mean for social influences was the lecturers encourage the students to use the MOOCs learning module in their learning process. This can be proved through the results gain from the research made by Norazah Nordin, Mohamed Amin Embi & Helmi Norman (2015), the positive results were achieved for the support of MOOCs usage from the lecturers and universities which is about 85.7%. This was might be the students felt that the lecturers were always with them and help them in the teaching and learning process. With the different approach from the lecturers such as teaching videos, it could assist the students and increased their understanding in learning.

Descriptive analysis of behavioral influences is shown in the table below. Respondents were asked their opinion about the voluntary usage towards MOOCs learning module which consists of five (5) questions using the 5 Likert Scale.

	N	Mean	Std. Deviation
16. I like studying using MOOCs learning module.	359	3.47	.779
17. I study using the MOOCs learning module even though it is not compulsory.	358	3.39	.882
18. I complete the activities in MOOCs learning module even without lecturer's instruction.	359	3.38	.902
19. I like to interact or read comments/views of friends who take the course in the MOOCs platform.	359	3.50	.868
20. I encourage my friends to use MOOCs learning module.	359	3.52	.861
Valid N (listwise)	358		

Table 4- Descriptive Analysis – Behavioral Influences

Based on the Table 4, all the respondents have average above than 3.00. The respondents feel they like studying using the MOOCs learning module (mean: 3.47) and like to study using the MOOCs learning module even though it is not compulsory (mean: 3.38). In addition, the respondents agreed that they completed the activities in MOOCs learning module even without the lecturer's instruction (mean: 3.38). The respondents also liked to interact or read comments and views of friends who take the course in the MOOCs platform (mean: 3.50) and they encourage their friends using the MOOCs learning module (mean: 3.52).

From the survey, it can be seen that the respondents agreed the MOOCs learning module is very beneficial and gives many positive impacts to them. This might be because of the simple features that can convey many information to them. The respondents also agreed that by using MOOCs learning module, they can study as they want, anytime and anywhere. Known as conveniences, the lecturers always encourage the respondents used the MOOCs in the learning process and the respondents also encourage their friends in using the MOOCs learning module.

4.1 Hypothesis Testing Result

Correlations

		Usefulness	Ease_of_Use	Social_influences	Behavioral_influences
Usefulness	Pearson Correlation	1	.706**	.522**	.572**
	Sig. (2-tailed)		.000	.000	.000
	N	359	359	359	359
Ease_of_Use	Pearson Correlation	.706**	1	.643**	.625**
	Sig. (2-tailed)	.000		.000	.000
	N	359	359	359	359
Social_influences	Pearson Correlation	.522**	.643**	1	.701**
	Sig. (2-tailed)	.000	.000		.000
	N	359	359	359	359
Voluntary Usage	Pearson Correlation	.572**	.625**	.701**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	359	359	359	359

** . Correlation is significant at the 0.01 level (2-tailed).

Table 5- Correlations Between Dependents

This analysis was conducted to analyse the strength relationship between independent variables with dependent variable. The result in the table above was analysed by using the SPSS software.

The result of correlation analysis between independent variables perceived usefulness and dependent variable voluntary usage is 0.572 and is fall under coefficient range ± 0.60 to ± 0.80 . It can be seen that the relationship between perceived usefulness and voluntary usage is strong useful moderate. The relationship is significant between perceived usefulness and voluntary usage because the p-value is 0.000 is less than alpha value 0.01. Hence, the H1 is accepted.

Based on the Table 5, there is a positive relationship too between perceived ease of use with voluntary usage. The correlation is 0.625 and is fall under coefficient range under ± 0.60 to ± 0.80 . So, the relationship between perceived ease of use with voluntary usage is also strong useful moderate. The relationship is significant between perceived ease of use and voluntary usage because the p-value is 0.000 is less than alpha value 0.01. Therefore, H2 is accepted.

In addition, the table also shows that there is a positive relationship between social influences with voluntary usage. The correlation is 0.701 and it is fall under range ± 0.80 to ± 1.00 . The relationship between social influences with voluntary usage is high relationship. The relationship is significant between social influences and voluntary usage because the p-value is 0.000 is less than alpha value 0.01. Therefore, H3 is accepted.

4.2 Hypothesis Finding

H1 - There is significant relationship between perceived usefulness and MOOCs acceptance.

Based on the analysis and the result, it showed that perceived usefulness is one of the factor of MOOCs acceptance among the students in Universiti Teknologi MARA Pulau Pinang, Permatang Pauh Campus. The correlation is 0.572 and p value is less than 0.01. There is a positive relationship between this independent variable and dependent variable.

H2 - There is significant relationship between perceived ease of use and MOOCs acceptance.

Based on the analysis and the result, it showed that perceived ease of use is also one of the factors of MOOCs acceptance among the students in Universiti Teknologi MARA Pulau Pinang, Permatang Pauh Campus. The correlation is 0.625 and p value is less than 0.01. There is a positive relationship between this independent variable and dependent variable.

H3 - There is significant relationship between social influences and MOOCs acceptance.

Based on the analysis and the result social influences have high influence towards the MOOCs acceptance among the students in Universiti Teknologi MARA Pulau Pinang, Permatang Pauh Campus. The correlation is 0.701 p value is less than 0.01. There is a positive relationship between this independent variable and dependent variable.

5.0 Finding and Discussion

This research contributes to general knowledge by improving understanding of MOOCs by proposing a conceptual framework for students' continued intention to use MOOCs. The acceptance of the MOOCs learning module can be influenced either by perceived usefulness, perceived ease of use and social influences. Based on the result, the social influences gave the highest impact of usage of MOOCs learning module. It can be considered that the influences from the lecturers and friends are the external environments that gave positive impact to the students. According to Faridah et (2012), the findings of the previous study showed that students agreed that encouragement from lecturers convinced the students to use e-learning and this indicated that the role of lecturers was crucial in improving the effectiveness of e-learning. Social influence has a direct effect on behavioural intention to use a particular technology, and is moderated by gender, age, experience, and voluntariness of use

Alraimi, Zo, and Ciganek (2015) reported that the intention to continue using MOOCs was significantly influenced by the courses' perceived reputation, perceived openness, perceived usefulness and overall user attitude toward use with perceived reputation and perceived openness being the strongest predictors.

5.0 Conclusions

In Malaysia, education is one of the biggest challenges for the government. There are many ways and techniques in improving the education and one of them is by using the technology as a medium in teaching and learning process. As the advancement of technology in the modern era, the government should think critically to change the education's environment based on today's needs. With this phenomenon, some of the universities and colleges had already started to take step and take the challenge to change from conversational education to the technological education. The MOOCs learning module was the result and they believe that MOOCs learning module will help the students as well as instructors improve in their teaching and learning skills.

This research had indicated the most influenced factor influencing the MOOCs acceptance among the students in Universiti Teknologi MARA Pulau Pinang, Permatang Pauh Campus is the social influences. The acceptance among the students will be higher when they realize and know that their peers and friends also use the MOOCs as their learning medium. Even this research also indicated that perceived usefulness

and perceived ease of use as the factors that can influence the usage of MOOCs, still the social can bring positive influences to the students.

Moreover, the usage of MOOCs still can be increase with the cooperation from the lecturers, universities as well as the developers. As to increase the usage of MOOCs among the students in Universiti Teknologi MARA Pulau Pinang, Permatang Pauh Campus, some recommendations can be done.

- a. Provide sufficient and current content such notes, videos, audios and images which can fulfil the students' needs and requirements.
- b. The platform needs to be interactive and user friendly.
- c. The contents need to be well organized so that the contents can be easily access.
- d. Include the manual or user's guide which explain on how to use the platform. The manual and user's guide will be so useful to the new students.

Rather than focusing more about the social influences from external parties such as peers and friends, the lecturers can conduct a survey to the students about their perception on MOOCs contents and seek for their ideas or view for the future improvement. The active interactions between lecturers and students in the MOOCs platform also can encourage more students to use the MOOCs. The interactions can be done either with the discussion, forum, performances on quizzes or assignments. In addition, according to Hakimi (2018), utilizing social media effectively for announcing interesting facts about the platform may better retain existing users and open the doors for MOOCs providers to attract new users.

Further studies could also focus on redesigning the method of measuring readiness by introducing direct measures and in-depth analyses. Identified demographic factors could be widened to include students' disciplines.

References

- Al-Adwan, A., Al-Adwan, A. & Smedley, Jo. (2013). Exploring student's acceptance of e-learning using Technology Acceptance Model in Jordanian universities. *International Journal of Education and Development using Information and Communication Technology (IJEDICT)*, 9(2), 4-18. doi: <https://files.eric.ed.gov/fulltext/EJ1071365.pdf>
- Alraimi, K. M., Zo, H. & Ciganek, A. P. (2015). Understanding the MOOCs continuance: The role of openness and reputation. *Computers & Education*, 80, 28-38. <http://doi.org/10.1016/j.compedu.2014.08.006>
- Annamalai, N. (2019). How Malaysian lecturers view MOOC and its challenges. *Journal of Nusantara Studies (JONUS)*, 4(2), 144-167. doi: 10.24200/jonus.vol4iss2pp144-167
- Apuke, O. D. (2017). Quantitative research methods: A synopsis approach. *Kuwait Chapter of Arabian Journal of Business and Management Review*, 6(11), 40-47. doi:10.12816/0040336
- Bhattacharjee, A. (2001). Understanding information systems continuance: An expectation-confirmation model. *MIS Quarterly*, 25(3), 351-370. doi: org/10.2307/3250921
- Brimo, A. (2014). OpenLearning Selected as Malaysia's National MOOC Platform. Retrieved from <https://learninghub.openlearning.com/2014/09/26/openlearning-selected-as-malaysiasnational-mooc-platform/>

- Belanger, Y., & Thornton, J. (2013). Bioelectricity: A quantitative approach. Retrieved on May 7 from http://dukespace.lib.duke.edu/dspace/bitstream/handle/10161/6216/Duke_Bioelectricity_MOOC_Fall2012.pdf.
- Baturay, M.H. (2014). An overview of the world of MOOCs. *Procedia - Social and Behavioral Sciences*, 174(2015), 427 – 433. doi: 10.1016/j.sbspro.2015.01.685
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use and user acceptance of information technology. *MIS Quarterly*, 3(3), 319-340. doi : 10.2307/249008
- Fianu, E., Blewett, C., Ampong, G., & Ofori, K. (2018). Factors affecting MOOC usage by students in selected Ghanaian Universities. *Education Sciences*, 8(2), 70. doi:10.3390/educsci8020070
- Frank, S. (2012). Review: MITx's online circuit and analysis course. *IEEE Spectrum*. Retrieved on January 11, 2014 from <http://spectrum.ieee.org/at-work/education/review-mitxs-online-circuit-design-and-analysis-course>
- Friedman, T. (2012, May 16). Come the revolution. *The New York Times*, p. A25. Retrieved from http://www.nytimes.com/2012/05/16/opinion/friedman-come-the-revolution.html?_r=0
- Goldberg, L. R., Bell, E., King, C., O'MARA, C., Mcinerney, F., Robinson, A., & Vickers, J. (2015). Relationship between participants' level of education and engagement in their completion of the understanding dementia massive open online course. *BMC Medical Education*, 15(1). doi: 10.1186/s12909-015-0344-z
- Gorard, S. (2001). *Quantitative Methods in Educational Research: The role of numbers made easy*. London: The Tower Building
- Hakami, N. A. (2018). An investigation of the motivational factors influencing learners' intentions to continue using Arabic MOOCs (Doctoral dissertation). Retrieved from https://eprints.soton.ac.uk/418819/1/Final_Thesis.pdf
- Harte, N. (1986). *The University of London, 1836-1986*. London: The Athlone Press
- Hew, K. F., & Cheung, W. S. (2014). Students' and instructors' use of massive open online courses (MOOCs): Motivations and Challenges. *Educational Research Review*, 12, 45-58. <http://dx.doi.org/10.1016/j.edurev.2014.05.001>
- Holdaway, X. & Hawtin, N. (2013, April 29). Major players in the MOOC Universe. Retrieved from <https://www.chronicle.com/article/Major-Players-in-the-MOOC/138817>
- Hood, N., Littlejohn, A., & Milligan, C. (2015). Context counts: How learners contexts influence learning in a MOOC. *Computers & Education*, 91, 83–91. doi: 10.1016/j.compedu.2015.10.019
- Joo, Y. J., Park, S., & Shin, E. K. (2017). Students' expectation, satisfaction, and continuance intention to use digital textbooks. *Computers in Human Behavior*, 16, 83-90. doi: /10.1016/j.chb.2016.12.025
- Karahanna, E., Straub, D. W., & Chervany, N. L. (1999). Information technology adoption across time: A cross-sectional comparison of pre-adoption and post-adoption beliefs. *MIS Quarterly*, 23(2), 183-213. <https://doi.org/10.2307/249751>

- Khan, E. (2016). Factors influencing intention to use massive open online-course on German market (Master's thesis). Retrieved from <https://pdfs.semanticscholar.org/e1b8/c7e9c84b241988b8c1e8cd56c56d8671837c.pdf>
- Koller, D. (2012, June). What we're learning from online education. *TED.com*. Video retrieved from http://ted.com/talks/daphne_koller_what_we_re_learning_from_online_education
- Levy, D. (2011). Lessons learned from participating in a connectivist massive online open course (MOOC). Proceedings of the Chais conference on instructional technologies research 2011: Learning in the technological era. Eshet-Alkalai, Y., Caspi, A., Eden, S., Geri, N. & Yair, Y. (Eds.), The Open University of Israel, Raanana, 31-36. Retrieved on January 11, from http://www.openu.ac.il/research_center/chais2011/download/f-levyd-94_eng.pdf.
- Liu, I. F., Chen, M. C., Sun, Y. S., Wible, D., & Kuo, C. H. (2010). Extending the TAM model to explore the factors that affect intention to use an online learning community. *Computers & Education*, 54(2), 600-610. doi: 10.1016/j.compedu.2009.09.009
- McGovern, E & Baruca, A. (2013). Want to enroll in a MOOC? No thanks, my professors have their own videos. *Journal for Advancement of Marketing Education*, 21(2). Retrieved from https://www.researchgate.net/publication/289319290_Want_to_enroll_in_a_mooc_no_thanks_my_professors_have_their_own_videos
- Mee, C. K., Binti, S., & Khoo, L. (2018). Undergraduate's Perception on Massive Open Online Course (MOOC) Learning to Foster Employability Skills and Enhance Learning Experience. *International Journal of Advanced Computer Science and Applications*, 9(10). doi: 10.14569/ijacsa.2018.091060
- Mendoza, G.G, Jung, I., Kobayashi, S. (2017). A review of empirical studies on MOOC adoption: applying the unified theory of acceptance and use of technology. *International Journal for Educational Media and Technology*, 11(1), 15-24. Retrieved from https://www.researchgate.net/publication/318226133_A_Review_of_Empirical_Studies_on_MOOC_Adoption_Applying_the_Unified_Theory_of_Acceptance_and_Use_of_Technology
- Moe, R. (2015). The brief & expansive history (and future) of the MOOC: Why two divergent models share the same name. *Current Issues in Emerging eLearning*, 2(1). Retrieved from https://scholarworks.umb.edu/ciee/vol2/iss1/2?utm_source=scholarworks.umb.edu%2Fciee%2Fvol2%2Fiss1%2F2&utm_medium=PDF&utm_campaign=PDFCoverPages
- Mawaddah, M. & Mohd Kamarul (2018). Factors affecting MOOCs continuance intention in Malaysia: A proposed conceptual framework. *Journal of Humanities, Language, Culture and Business*, 2(7), 61-72. Retrieved from <https://pdfs.semanticscholar.org/ed13/ae36eed7491352b7bf60f97d0cbb786f5b6a.pdf>
- Nipper, S. (1989). Third generation distance learning and computer conferencing in Mason, R. and Kaye, A. *Mindweave: Communication, Computers and Distance Education* Oxford: Pergamon
- Nolen, L.J. (2016, March 3). Higher education. Retrieved from <https://www.britannica.com/topic/higher-education>

- Nordin, N., Norman, H., & Embi, M. A. (2016). Technology Acceptance of Massive Open Online Courses in Malaysia. *Malaysian Journal of Distance Education*, 17(2), 1–16. doi: 10.21315/mjde2015.17.2.1
- Ouyang, Y., Tang, C., Rong, W., Zhang, L., Yin, C., & Xiong, Z. (2017). Task-technology fit aware expectation-confirmation model towards understanding of MOOCs continued usage. *Proceeding of the 50th Hawaii International Conference on System Sciences*, 174-183
- Porter, S. (2015). *To MOOC or not to MOOC: how can online learning help to build the future of higher education?* Kidlington: Chandos Publishing
- Rahman, N. S., Adli, N. S., Raffei, A. F., & Ismail, N. S. (2020). Factors Determination MOOCs Continuance Intention: A Proposed Conceptual Framework. *IOP Conference Series: Materials Science and Engineering*, 769, 012052. doi:10.1088/1757-899x/769/1/012052
- Rahmat, M. H. (2014, September 14). Government hopes for more online varsity courses. *The Sun Daily*. Retrieved from <http://www.thesundaily.my/news/1174084>
- Sa, J.-H., Lee, J.-M., Kang, T.-W., & Gim, G.-Y. K.-B. (2016). A study of factors affecting the intention of usage in MOOC. *Advanced Science and Technology Letters*, 160-163. doi: 10.14257/astl.2016.127.32
- Siemens, G. 2013. Massive open online courses: Innovation in education? In *Open educational resources: Innovation, research and practice*, eds. R. McGreal, W. Kinuthia and S. Marshall, 5–16. Athabasca, Canada: Athabasca University Press. https://oerknowledgecloud.org/sites/oerknowledgecloud.org/files/pub_PS_OER-IRP_web.pdf#page=31
- Sumak, B., Polancic, G., & Hericko, M. (2010). An empirical study of virtual learning environment adoption using UTAUT. *Second International Conference on Mobile, Hybrid, and Online Learning*. IEEE Computer Society
- Tahiru, M., & Kamalludeen, R. (2018). Indicators of Students' Intention to Use Massive Open Online Courses for Academic Purposes. *Malaysian Online Journal of Educational Technology*, 6(3), 52–62. doi: 10.17220/mojet.2018.03.004
- The research paradigm – methodology, epistemology and ontology – explained in simple language. (2018, October 05). Retrieved from <http://salmapatel.co.uk/academia/the-research-paradigm-methodology-epistemology-and-ontology-explained-in-simple-language/>
- Venkatesh, V., Thong, J.Y.L. and Xu, X. (2012). Consumer acceptance and use of information technology: extending the unified theory of acceptance and use of technology. *MIS Quarterly*, 36(1), 157-178. doi:10.2307/41410412
- Wenger, E. (1991) *Situated Learning: Legitimate Peripheral Participation*. Cambridge: Cambridge University Press. <http://dx.doi.org/10.1017/CBO9780511815355>
- Wong, B. T.-M. (2016). Factors leading to effective teaching of MOOCs. *Asian Association of Open Universities Journal*, 11(1), 105–118. doi: 10.1108/aaouj-07-2016-0023

Zheng, S., Rosson, M. B., Shih, P. C., & Carroll, J. M. (2015). Understanding student motivation, behaviors and perceptions in MOOCs. Proceedings of the 18th ACM Conference on Computer Supported Cooperative Work & Social Computing - CSCW 15. doi: 10.1145/2675133.2675217

10 Advantages and Disadvantages of Questionnaires. (2020, October 22). Retrieved December 29, 2020, from <https://surveyanyplace.com/questionnaire-pros-and-cons/>