

## Perception and Intention to Use E-learning from Students' Point of View- An Evidence from Malaysia Local University

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### ABSTRACT

*Education landscape has changed dramatically due to Covid19 pandemic as in many country, conventional or face-to-face teaching and learning is no longer an option to avoid the spread of a virus. E-learning become one of the best alternative to ensure education process could continue because experts believe world could only recover from this crisis in another two years. This paper will delve into students' perspective about e-learning and their willingness to use e-learning. Technology Acceptance Model (TAM) was used to outlined this study. Majority of the student have an idea about what is e-learning. They also agree that e-learning able to be accomplished learning and assessment proses as well as enable the interaction among students and student with instructor. Result also indicate, majority of the students have positive opinion towards e-learning nevertheless they prefer e-learning to be embedded in their education process (hybrid learning) as they are still prefer to have some level of face-to-face learning. However, this result cannot be used to generalize the opinion of all university's' student as diploma student tend to feel more comfortable to have face-to-face interaction with lecturer because they are in the transition period from school to university.*

**Keywords:** *e-learning, Technology Acceptance Model (TAM), perceived usefulness, perceived ease of use*

### INTRODUCTION

Education is a backbone of a country as its help to build a good society and the nation. Attending the physical schools, colleges and universities and having physical interaction with teacher or instructor is our notion of what education process should be. However, information technology becomes a new normal in our life especially in the education sector. It has changed the way of teaching and learning conducted in the sector. Traditionally, the conventional classrooms are needed for education process. But now, teaching and learning can be done with the help of technology and it is called e-learning. According to Clark and Mayer (2016), e-learning can be defined as the instruction that is intended to support learning and is delivered through digital devices. Generally, e-learning courses are using words in the form of spoken, text or pictures such as animation or video and it is designed for individual self-study. The term e-learning actually has been introduced in education widely since the mid of 1990s (Mamattah, 2016). Since then, many prestigious universities accept and offer this kind of learning such as University of North Texas (start in 1995) and University of Stanford (start in 2005).

Recently, the world was hit by Coronavirus (COVID-19) pandemic and it definitely includes Malaysia too. As a precautionary measure to control the spread of the virus, the government of Malaysia has agreed to prohibit any face-to-face teaching processes that involve students to gather around in a large group.

Because of this precaution step, all schools, colleges, universities and institutions are temporarily closed. This has caused all teachers and lecturers need to find an alternative ways to complete the syllabus and the planned assessments without required students to gather around physically. Therefore, e-learning become viable solution or the platform in facing this pandemic. As a result, education paradigm has changed which e-learning becomes a center of attention. Thus, this study will delve into the students' perception about e-learning and their intention to use it. This study will use the theory of Technology Acceptance Model (TAM) that introduced by Fred Davis in year 1986.

According to Lai (2017), TAM is the model that specifically designed to predict the users' acceptance of technologies. In the basic TAM, there are two specific beliefs that have been tested. There are Perceived Usefulness (PU) and Perceived Ease of Use (PEU). PU and PEU have significant effect on attitude towards using technology (Maslim, 21-24 May 2007). Perceived Usefulness can be defined as the level of students' belief that by using e-learning, it will enhance their learning and Perceived Ease of Use can be defined as the degree of students expects e-learning is easy to use without the much effort (Mamattah, 2016 & Lai, 2017). PU can influences students' intention to embrace applications of e-learning (Maslim, 212-24 May 2007; Masrom, 2007). A study conducted on 102 undergraduate students of management information system found positive finding between PU with students' engagement with internet-learning based system (ILS) or e-learning (Saade & Bahli, 2005). A study by Liu, Ling and Peng (2005) also discovered positive finding between PU and student intention to use streaming based e-learning. Accordingly, PU is greater among learner who have higher self-efficacy (Fathema, Shannon, & Ross, 2015). Meanwhile, strong influence of peers to adopt collaborative technology as an alternative in learning is one of the nature of PEU (Cheung & Vogel, 2013). The system quality (SQ) provides significant positive effect on PEU. The quality issues such as functions, contents, navigation speed and interaction capability has resulted significant effect on learner positive attitude. Also, there is positive effect of PEU on PU because student believes the e-learning is useful when it is easy to use (Saade & Bahli, 2005). However there are no significant differences of PU and PEU on gender differences which showed in data collection of three academic periods from a number of university centers (Melendez, Obra, & Moreno, 2013).

A program and course are structured to enhance positive interaction between student, teacher and peers; however some problems do occur during online learning (Dabbagh, Fake, & Zhang, 2019). Student satisfaction affected by instructor's interaction within online or face to face sessions (Conklina, Oyarzun, & Barreto, 2017). According to Lowe & Mestel (2016), online tutorial provide convenience platform to the student yet face to face session is better to practice. Students also need additional arrangement and materials in order to facilitate them to understand thus score subjects (Said & Syarif, 2016). A study conducted by Conklina et al. (2017) observed the environment and interaction between student and instructor were rated low during online learning. Lowe & Mestel (2016) also reported interaction between student and teacher are low for online tutorial learning. The interaction among student also becomes less productive due to technological barriers Conklina et al. (2017). As a result, students would rather choose blended learning environment although they prefer to have flexibility to learn and study that meets their needs. However, Horzum (2015) found positive result regarding interaction and social presence during online learning. This study also stated student is dissatisfied with current course structure as they think it's too heavy and reduce their interactions and social presence. Hence to increase satisfaction and students' intention to use e-learning, current course structure need to be reduced.

## **QUESTIONNAIRE AND DATA ANALYSIS**

This study was conducted among diploma student at Universiti Teknologi MARA, Perak Branch (Tapah Campus). In order to achieve research objective of this study, a set of questionnaire is used to collect data. This questionnaire was distributed to 290 students, of these 212 were returned representing 73% of

response rate. The respondents were selected randomly from three (3) faculties available in this campus, which are Faculty of Applied Science, Faculty of Accountancy and Faculty of Science Computer and Mathematic. Out of 212 respondents, 37% are students from Faculty of Science Computer and Mathematic, follow by 33% are accountancy's students and 30% are Faculty of Applied Science.

The questionnaire was divided into five (5) parts. The first part is to collect demographic information which to understand the respondents' background information, follow by perceived usefulness of e-learning, perceived ease of use of e-learning, attitude towards using e-learning and intention to use e-learning in future. The questions are replicated from study by Mamattah (2016) that developed the questionnaire based on Technology Acceptance Model (TAM). Data collected from this questionnaire were entered in SPSS for purpose of data analysis and interpretation.

## FINDINGS AND DISCUSSION

### Demographic Results

This study comprised of 33.5% male respondents and 66.5% female respondents. Out of 212 respondents, there are 141 female and 71 male students. Respondents are reasonably distributed from different faculties which are from Faculty of Computer and Mathematical Sciences (FSKM), Faculty of Accountancy (FP) and Faculty of Applied Sciences (FSG). Thus, the data presented is representative of all students of the campus. Besides that, 90.1% of the respondents possess a personal computer while only 9.9% of them do not. Furthermore, only 15.6% of the respondents have been using the computers for less than 1 year. The other respondents have been using computer more than 1 year which is 44.3% have been using computer for between 1 to 5 years, 28.3% have using computer for between 6 to 10 years and 11.8% have been using it for more than 10 years. From the statistics, it can be seen that most of the students have more than enough experience using a computer.

### Perceived Usefulness of E-Learning

In order to understand the respondents' view on e-learning, some common features were used in this study. The respondents were asked to choose from the various definitions, forms and types of e-learning that was selected. As a result, it shows that 52.8 % of the respondents understand e-learning as online learning. Accordingly, this result is in line with Mamattah (2016) as 50% of the respondents understand e-learning as online learning meanwhile 31.6% consider e-learning as learning in all forms such as learning at own pace, online learning, watching pre-recorded videos and live streaming lectures. This group of respondents believes that e-learning is not limited only to one features but also allowed the synchronous and asynchronous learning. It can further be seen in Table 1 that 7.5% of the respondents think that e-learning as learning at own pace. On the other hand, 3.8% of them consider e-learning as watching pre-recorded videos provided by the educators. Besides, only 2.4% of the respondent has no idea about e-learning and 1.9% that think e-learning is a teaching and learning process where people having live lectures via internet.

Table 1: Understanding of E-learning by Gender

Gender	Description of e-learning						Total
	No idea	Own pace	Online learning	Watch video	Live lecture	All	
Female	0.0%	5.7%	53.9%	2.8%	2.1%	35.5%	100%
Male	7.0%	11.3%	50.8%	5.6%	1.4%	23.9%	100%
Total	2.4%	7.5%	52.8%	3.8%	1.9%	31.6%	100%

Pertaining to e-learning features, the feedback of respondent was recorded and illustrated in the Table 2. Result indicates that e-learning platform is suitable to cater people from different geographical areas. About 68.4 % agree with this statement and only 15.1 % and 16.5 % choose undecided and disagree with it. It can also be seen that 67% of the respondents agree that e-learning increase the possibility of interaction among students. As the students have less interaction with the lecturers, it actually gives more space for the students to interact among them and discuss about the learning topics. Some of the respondents cannot decide on this matter and only 14.2% disagree with this feature.

Table 2: Features of E-learning

Features of E-learning	Agree	Undecided	Disagree	Total
Tests and assignments can be completed electronically	61.3%	27.4%	11.3%	100%
Students can learn at their own pace	48.6	27.4%	24.1%	100%
People can study from anywhere in the world	68.4%	15.1%	16.5%	100%
Interaction between instructor and students is possible	60.8%	24.5%	14.6%	100%
Interaction among students is possible	67%	18.9%	14.2%	100%

Besides that, 61.3% of respondents think that tests and assignments can be conducted electronically, while 27.3% were undecided and 11.3% disagree. Similar to Mamattah (2016), this study also shows that interaction between instructor and students is not supported by the respondents. The result shows that only 60.8% agree with this feature and the rest of them were undecided and disagree. This statistic is similar to study conducted by Conklina et al. (2017) that observed interaction between student and instructor were rated low during online learning. Lastly, the response concerning learning at their own pace in e-learning shows that 48.6% respondents agree and more than half respondents pick undecided and disagree. It is indicated that the respondents still find it was difficult for them to learn at their own pace as e-learning is still new learning platforms for them.

In addition to that, further exploration was conducted to know what female and male respondents think about the interaction among students who study through e-learning. The result of Chi-Square test was shown in the Table 3 below.

Table 3: Gender and View on Interaction among Students – Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	.285 <sup>a</sup>	2	.867
Likelihood Ratio	.289	2	.866
N of Valid Cases	212		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 10.05.

The result shows that there is no significant association between gender and the thought of e-learning interaction among students,  $\chi^2(2, N = 212) = 0.29, p = 0.867$ . This finding was supported by Melendez, Obra & Moreno (2013) that state there are no significant differences of PU and PEU on gender differences in data collection of three academic periods from a number of university centers.

This comparison of views shows that both male and female believe that there is high possibility of interaction among students where 69% of male agree on the statement, followed by 66% of female respondents. On the other hand, 16.9% of male respondents and 19.9% of female respondents were

undecided. Besides, about 14.1% and 14.2% disagree to this possibility. This finding is contradicted with the finding in Mamattah (2016). Details of this statistics is shown in Figure 1.

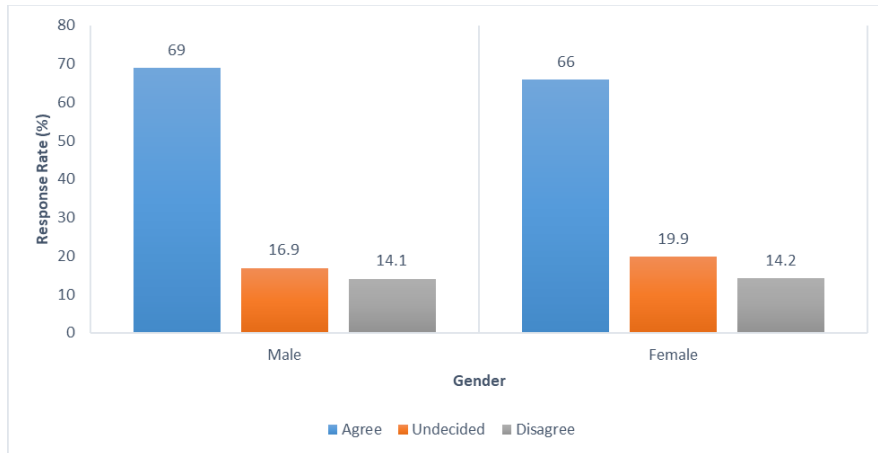


Figure 1: Comparison of the Possibility Interaction among Students by Gender

### Perceived Ease of Use of E-Learning

The study found that 55.9% of the respond perceived e-learning as easy to use when they were ask on their view on the usage of e-learning. It is then followed by 23.1% students that cannot decide whether this platform can be access easily or not. Besides, 12% of the students disagree with the statement and find that e-learning is not easy to be implied in learning process. While 6.2% of the students strongly agree about the use of e-learning, there are still 2.8% of the students who strongly disagree on the e-learning system. Those percentages are quite low since the person need to have good technological know-hows in order to make proper use of the e-learning tools as mentioned by Lee & Witta (2001). The details of the result are shown in Table 4 below.

Table 4: Easy Usage of E-learning Platform

Easy usage of e-learning platform	Strongly disagree	Disagree	Undecided	Agree	Strongly agree	Total
User friendly	3.3%	16%	26.9%	51.9%	1.9%	100%
Easy to find info	2.4%	8%	19.3%	59.9%	10.4%	100%
Average	2.8%	12%	23.1%	55.9%	6.2%	100%

In addition to that, the students also find that information technology (IT) tools are very comfortable to use. 34.8% of them find that IT tools are very easy to use and 50.6% of them find that it is easy to be practiced. According to Tagoe (2012), good computer skills will help students to participate in e-learning and the comfort of using the listed tools are advantages to students. Other than that, 6.9% were undecided and 7.4% choose to put effort on trying to learn about the tools. Lastly, only 0.3% of the respondents think they cannot learn all the listed IT tools such as attaching files, chatting, downloading, and posting messages (Table 5).

Table 5: Level of Comfort using IT

Level of comfort using IT	Very easily	Easily	Undecided	Will try	I can't	Total
Attaching files	30.2%	50.9%	7.5%	10.8%	0.5%	100%
Chatting	38.7%	50.5%	5.2%	5.2%	0.5%	100%
Downloading	36.8%	49.1%	6.1%	8%	0%	100%
Posting messages	33.5%	51.9%	9%	5.7%	0%	100%
Average	34.8%	50.6%	6.9%	7.4%	0.3%	100%

### Students' Attitude towards E-Learning

With regards to the opinion of the respondents, the result shows that only 24.1% like the idea of e-learning, 42% were undecided and 33.5% disagree with the idea. However, the respondents think that e-learning is not a bad platform as 52.4% of them agree that e-learning is an innovative concept and must be encouraged and 46.7% of them find that it is a fun platform to be used. Based on this results, overall respondents have positive opinion on e-learning and it will influences their behaviours towards this new platforms as mentioned by Ajzen & Fishbein (2000). The details are shown in Table 6.

Table 6: Opinion of E-learning

Attitude of respondents about e-learning	Agree	Disagree	Undecided	Total
Like the idea of e-learning	24.1%	33.5%	42%	100%
E-learning is an innovative concept and must be encouraged	52.4%	17.9%	29.7%	100%
E-learning platform will be fun to use	46.7%	24.1%	29.2%	100%
Average	41.2%	25.2%	33.6%	100%

### Influence of External Factors on Attitude Formation Towards E-learning

In the concept of TAM, it was highlighted that external factors also have influence on the opinion form towards e-learning and their intention to use it (Davis et al., 1989). From the response in Table 7, 76.9% of the respondents have receive positive encouragement from someone close and was told that it is not a difficult system to use. In addition, 63.7% of them have heard positive news report about e-learning and 59.4% heard that it is a good experience. Instead of news report, about 56.1% of the respondents indicated that they have received positive feedback from family members. On average, external factor give positive influence on attitude formation towards e-learning.

Table 7: External Influences on Attitude Formation about E-learning

External factors on attitude formation	Positive view	Negative view	Total
Encouragement from someone close	76.9%	23.1%	100%
Have heard that it a good experience	59.4%	40.6%	100%
From family	56.1%	43.9%	100%
Was told is not a difficult system to use	76.9%	23.1%	100%
Have heard positive news report about e-learning	63.7%	36.3%	100%
Average	66.6%	33.4%	100%

## Opinion about Employers' Acceptance

Instead of external factors, another concern about e-learning is the acceptance of employers. In Malaysia, most people further studies in order to get a better opportunity in employment. Therefore, some was afraid that there might exist discrimination during the employment process caused by the non-face-to-face teaching and learning. Therefore, a question was included in the questionnaire to know about the respondents' opinion about this matter. The response to this question shows that 59% of the respondents think that they will suffer from this kind of discrimination. Furthermore, both male and female have the same opinion and think that they might become the victim of this issue. It can further be seen in Table 8 that only 8% of the respondents disagree and 33% were undecided.

Table 8: Fear of Employers' Discrimination by Gender

Gender	Disagree	Undecided	Agree	Total
Female	7.8%	34.8%	57.5%	100%
Male	8.5%	29.5%	62%	100%
Total	8%	33%	59%	100%

The Chi-square test of the relationship between gender and fear of the employers' discrimination against learner was found to be statistically not significant,  $\chi^2(2, N = 212) = 0.57, p = 0.751$  as shown in Table 9. Thus, it means that both male and female respondents had the same opinion on this issue.

Table 9: Fear of Employers' Discrimination by Gender – Chi-Square Test

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	.572 <sup>a</sup>	2	.751
Likelihood Ratio	.577	2	.749
N of Valid Cases	212		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.69.

## Cost of E-learning

Based on the result in Figure 2, both male and female agreed that both e-learning and classroom learning have same cost. 45.3% of female respondents and 39.4% of male respondents think that the usage of IT tools will not reduce the cost of learning. In this case, researchers believe that as students has more choices of internet packages, they find that e-learning will not incurred more cost compared to the traditional method. As traditional methods cost them books, e-learning will cost them the internet access. Thus, it is similar in terms of cost. Besides that, 33.8% of male and 29.5 % of female respondents think that e-learning is more expensive compared to the face-to-face learning. Contrast to that, 26.8% of male and 25.2% of female state that classroom learning is more expensive than e-learning.

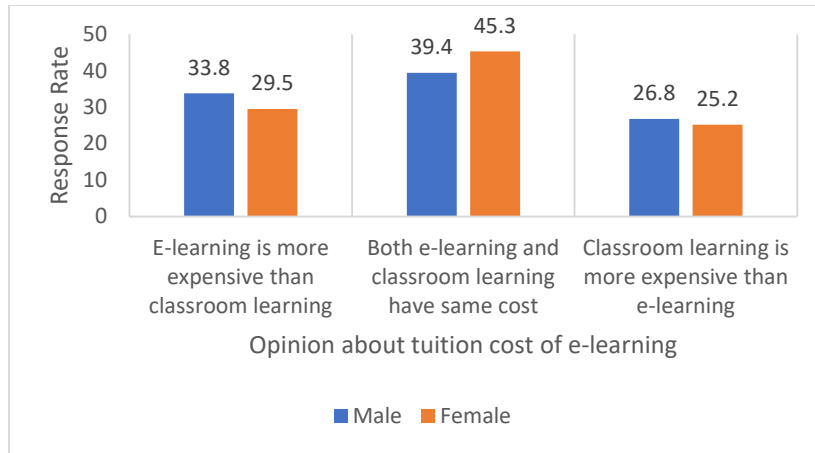


Figure 2: Opinion about Tuition Cost of E-learning by Gender

### Intention to Use E-Learning

From the research data shown in Figure 3, both male and female respondents do not prefer fully online learning compared to face-to-face. Only 1.4% of male and 3.5% of female respondents that agree to adopt fully online learning system. Contrast to that, 21.1% of male and 21.3% of female respondents comfortable to face-to-face learning only. From the result, it shows that majority male and female respondents prefer hybrid learning which shows that the respondents were trying to adapt with online learning but still cannot count fully on this IT tools as the learning platform. Lowe & Mestel (2016) in their research also find that students prefer to practice face-to-face session even though online tutorial provide convenience platform to them. Besides, it is also in line with study conducted at University of Ghana by Tagoe (2012) that shows students prefer hybrid learning as their teaching and learning platform.

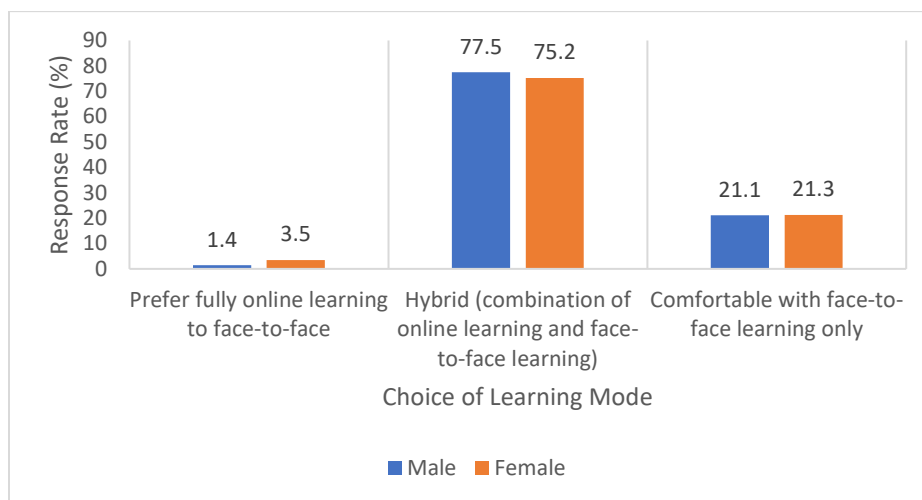


Figure 3: Choice of Learning Modes by Gender



## CONCLUSION AND RECOMMENDATION

This study was carried out to find out students' perception about e-learning. Perceptions were pursued from the students of Universiti Teknologi MARA Perak Branch (Tapah Campus) and the Technology Acceptance Model (TAM) was used as the theory for this study. Our respondents agree that e learning is useful in enhance their learning including facilitate interaction among students and between instructor and students. It has same direction on PEU as many respondents agreed that e-learning is easy to be used as their learning tools. Other than that, respondents have positive views towards e-learning. However, only 24.1% is agree when they were ask whether they like the idea of e learning. Researchers believe that this result was caused by certain factor such as fear of technology. Technology advancement in Malaysia is relatively far behind compare to other countries such as Japan and Korea. Thus, it make the students feel uncomfortable to rely only on technology especially a newly introduced. This result is contradicted with finding in Korea (where technology is more advance) which many student have intention to use e-learning or m-learning as they believe it is beneficial preparation for job market (Park, Nam, & Cha, 2012). For that reason, respondents choose hybrid learning compare to the other two choices. Overall, it shows that respondents are not rejecting e-learning. They want to use this new technology based learning but they need more time to get use to this new paradigm.

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