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## **STUDENTS' PERCEPTIONS ON ONLINE LEARNING**

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### **Abstract:**

The purpose of this paper is to explore students' views of online learning based on a theoretical framework known as Technology Acceptance Model (TAM). It is mainly qualitative in nature alongside some quantitative data. It examines students' preference for their choice of learning mode for the post-COVID-19 period or when they are in a position to return to the campus when the pandemic situation improves. They are also asked to provide reasons for their preference. The research data was collected at a local university in Malaysia through an interview with 41 respondents. The results of the research show that the majority of the student respondents prefer to have hybrid learning that offers a combination of online and face-to-face sessions followed by fully face-to-face learning mode. No respondent has opted for fully online learning as their preferred choice of learning mode in the near future. In general, the respondents perceive that online learning is creative, innovative, convenient, time-saving and eco-friendly. However, as emerged in the data, in relation to online learning, students have two major concerns, namely additional cost incurred for the high usage of the Internet data and poor/no Internet connection at rural areas. The findings further reveal that institutional support, technology accessibility and COVID-19 concern are the three external factors that have influenced the respondents' attitude and intention in using online learning in the near future. Higher institutions thus can play an important role in enhancing students' online learning by upgrading the existing learning management system and the campus Internet connectivity.

**Keywords:**

Online Learning, Hybrid Learning Mode, Perception, Qualitative Study, Technology Acceptance Model

## **Introduction**

The purpose of this paper is to explore students' views of online learning with the focus on examining students' preference for the type of learning mode for the post-COVID-19 period or when they are in a position to return to the campus when the pandemic situation has improved. They are also asked to provide reasons for their preference. The findings of the present study are discussed based a framework known as Technology Acceptance Model (TAM) (Davis, 1989).

Past studies on online learning have mainly employed the TAM model as a theoretical framework and it is known as an "empirically validated" theoretical model (Mamattah, 2016, p. 12) theoretical model. The TAM model is originally proposed by Davis (1989). Researchers have employed TAM to help explain and predict if a user accepts or intends to use the information technology (Legris, et. al, 2003). In addition, researchers can use the model as the basis to trace how different external factors influence perceived ease of use, perceived usefulness, attitude, intention to use and the actual use of a technology.

The model shows that there are four stages, namely perceived usefulness, ease of use, attitude towards usage and the behavioural intention to use (Davis, 1989). According to Davis (1989), perceived usefulness (PU) is "the degree to which a person believes that using a particular system would enhance his or her performance" (Davis, 1989, cited in Mamattah, 2016, p,12) and perceived usefulness is also defined as the extent to which users believe using online learning will enhance their learning or be useful to their learning (Mamattah, 2016). On the other hand, perceived ease of use, in TAM model, is defined as the extent to which a user believes he or she will be able to use a specific technology without much effort and thus find it easy to use it (Davis et al., 1989). Perceived ease of use and perceived usefulness can influence users' attitude towards the use of the technology and the attitude will then affect both the intention to use and then the actual use of a technology (Davis, 1989).

Applying this model to this research, the study aims to discover students' preference for their mode of learning for the post COVID period or when they are in a position to return to the campus after the pandemic situation has improved, based on their positive or negative feelings (attitudes) towards online learning and such attitudes can be caused by some external factors.

The findings can help the parties concerned for example, the institution to identify the major limitations and promoters in making learning ineffective and effective respectively for their students. The findings can also contribute new knowledge to the existing literature relating to online learning among students during COVID-19 pandemic period. In relation to the purpose of the study as explained above, the present study attempts to answer the following research questions:

- (i) What is the most preferred learning mode among the respondents?
- (ii) What are the reasons given for the most preferred choice of learning mode?

- (iii) What are the respondents' perceptions on online learning as emerged in the interview data?
- (iv) How could the respondents' perceptions possibly explain the TAM model in terms of external factors, attitude and intention to use online learning?
- (v) How are the present findings similar to and/or different from the past findings?

## Literature Review

Various researchers have defined online learning differently. Masrom (2007) defined online learning as any form of education realised by the use of the Internet and its technologies and it includes the use of the Wide Web for course content and instruction support while Singh and Thurman (2019) defined online learning as learning experiences in synchronous or asynchronous form using various electronic devices with the Internet access. Such learning environments will enable students to learn independently from anywhere and to interact with their instructors and course mates.

On the other hand, other researchers, Ong and Lai (2006), define online learning as a mode of information and instruction delivery through the Internet using computer network technology. Online learning can be conducted in three different types, namely hybrid, web-assisted and fully online.

In the literature, researchers further classify the above three modes of learning into two forms, namely synchronous and asynchronous learning. When using synchronous learning, learning occurs in real time with an instructor conducting a class and interacting with students through social platforms (Kalpana, 2010). In other words, this form of live learning (synchronous) is facilitated by electronic media. Some of the 'real life' (Mamattah, 2016, p. 7) classroom activities are such as video conferencing, chat, instant message, web conferencing and application sharing and in previous studies such as in Khalil et al.'s (2020) study, synchronized online classes were well-accepted by the group of students participated in the study. Students also found that synchronous learning provides greater support for psychological needs and overall satisfaction compared to asynchronous form of learning (Fabriz et al., 2021). When using asynchronous form of learning, learning does not occur in real time but it allows for self-paced learning and thus gives more flexibility in the learning process (Kocur & Kosc. 2009). Some of the reference materials or tools used in this form of learning are such as databases, document libraries, e-books, forum, messaging, streaming audio, streaming video, web logs (blogs) and website links (McGreal & Elliott, 2004 cited in Mamattah, 2016, p. 8).

In relation to fully online learning and web-assisted learning, Buzzetto-More (2015) notes that they differ in that the former is asynchronous in nature and does not allow live interaction while the latter is synchronous in nature and allows for live interaction. On the other hand, hybrid learning combines face-to-face interaction with online learning (with live interaction) (Allen and Seaman, 2003) and it is predicted that there will be an increase in the use of hybrid learning in higher institutions in the future (Mamattah, 2016).

Hybrid learning is also known as "blended learning" (Bereiter, 2002; Garrison, Archer & Anderson, 2003; McLoughlin & Lee 2007; Bonk & Graham, 2012). As noted by Graham and Dziuban (2008), the terms "hybrid" and "blended" can be employed mutually. The above authors' definition on blended learning covers a wider scope that is, blended learning as a learning mode that mixes various event-based activities, namely self-paced online learning,

live online learning and face-to-face classroom learning. Such view is in contrary to some views in the literature (Allen & Seaman, 2003) which states that hybrid learning is a combination of both face-to-face learning and web-assisted learning (live interaction).

In consistent with the prediction that hybrid learning will be a popular mode of learning in the future, Dziuban, Hartman and Moskal (2005) believe that blended learning combines the effectiveness of classroom or face-to-face class with online learning without necessarily conform to a ratio of delivery modalities.

### **Methodology**

The present study is both qualitative and quantitative. In the quantitative research approach, a survey was used while in the qualitative research approach, unstructured interviews which generate qualitative data through the use of open questions was carried out. However, the study is mainly qualitative in nature.

#### ***Quantitative Data***

Prior to the interview, students are asked to indicate their preferred choice of learning mode on the Google form. Choices of learning modes given are, namely hybrid, fully face-to-face and fully online. An explanation is given to the respondents on the definition for each of these three types of learning mode prior to filling in the google form. Frequency and percentage of respondents choosing their preferred choice of learning mode are tabulated.

#### ***Qualitative Data***

The present study opts for qualitative research method alongside the quantitative one as qualitative research methods can help seek greater understanding of experiences (Gridley, et al. 2009). To obtain the qualitative data, an interview was carried out to obtain insight into the students' perceptions and views on their preferred choice of learning mode for the post COVID-19 period or when they are in a position to return to the campus when the pandemic situation has improved. Their perceptions are based on their online learning during the MCO (Movement Control Order) period (March – October 2020) in Malaysia. The question was formulated to suit to the respondents' context and the objective of the study.

In the interview, students are asked to provide their response to the following question:

- (i) What is your preferred choice of learning mode upon your return to the campus when the pandemic situation has improved? Why?

#### ***Participants And Recruitment***

Forty-one undergraduate students at a local university in Malaysia were recruited for an interview from a purposive sample. The purposive sample comprises firstly, students of 20 years old and above and who are not in their first year of study (so that they have at least had some online learning experience in the campus through the university's learning management system prior to the unprecedented COVID-19 pandemic and secondly, students who have obtained at least an upper band 3 for their MUET results as English will be the language used for questionnaire and interview. The purposive sample consists of 211 respondents who have volunteered to answer a questionnaire relating to their perception of online learning during the COVID-19 MCO (Movement Control Period) in Malaysia (March- October 2020). The data of the questionnaire data is however not included in this study as it is not the objective of this

paper to look into the questionnaire data but the interview data contributed by the 41 student respondents who have been randomly selected from these 211 respondents.

The primary researcher carried out the interview during 2019-2020 academic year (Semester 2) (in mid-August 2020) via Google Meet. Using Google Meet platform, the primary researcher conducted and recorded the interview with the respondents' consent. In order to maintain confidentiality of the participants, the present study does not reveal the student respondents' names. The data was transcribed, analysed and coded.

As noted earlier, prior to the interview, the 41 participants were asked to tick their preferred choice of learning mode on the given Google form. Each of the participants has been reminded that they can only choose one option as their preferred choice of learning mode. Based on the respondents' answers on the forms, the quantitative data consisting of number/frequencies and percentages of participants opting for the learning modes were tabulated.

Considering the respondents' online learning experience during the MCO period that includes both live and self-pace learning, the present study defines online learning as learning that uses online platforms in the form of both synchronous (live interaction) and asynchronous (self-pace learning) and the respondents were given the definition prior to selecting their preferred learning mode.

### ***Conceptual Framework***

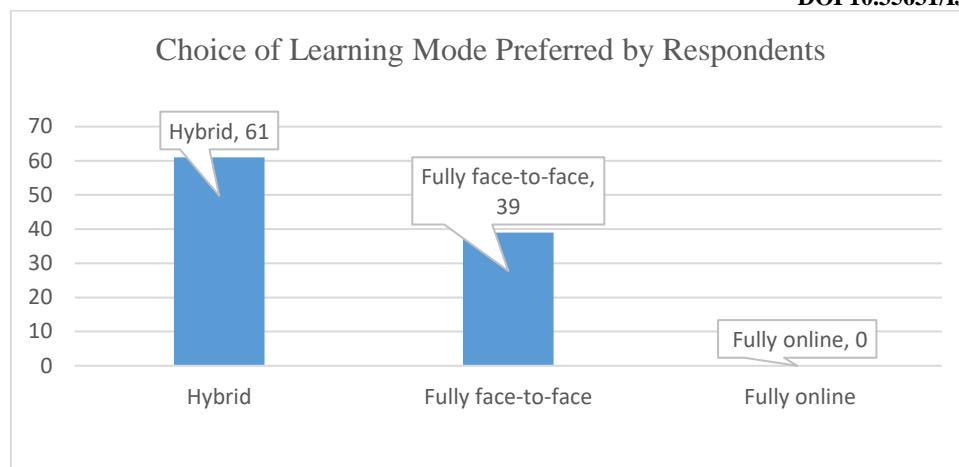
The conceptual framework for this research is adapted from the Technology Acceptance Model (TAM) by Davis (1989). The model describes the factors that determine the acceptance of the use of computers and pertinent technologies in various technologies and user groups. This study attempts to explain the findings relating to students' perception on their online learning using the TAM model.

### **Results**

When respondents were asked to indicate their preferred choice of learning mode upon their return to the campus when the pandemic situation has improved, 61% (25 out of 41 respondents) indicated that they would prefer the hybrid learning mode. 39% (16 out of 41) indicated that they would prefer the fully face-to-face learning mode and no respondent has opted for the fully online learning mode.

**Table 1: Choice of Learning Modes**

Learning mode	Frequencies	Percentage
Hybrid	25	61
Completely face to face	16	39
Completely online	0	0
Total	41	100



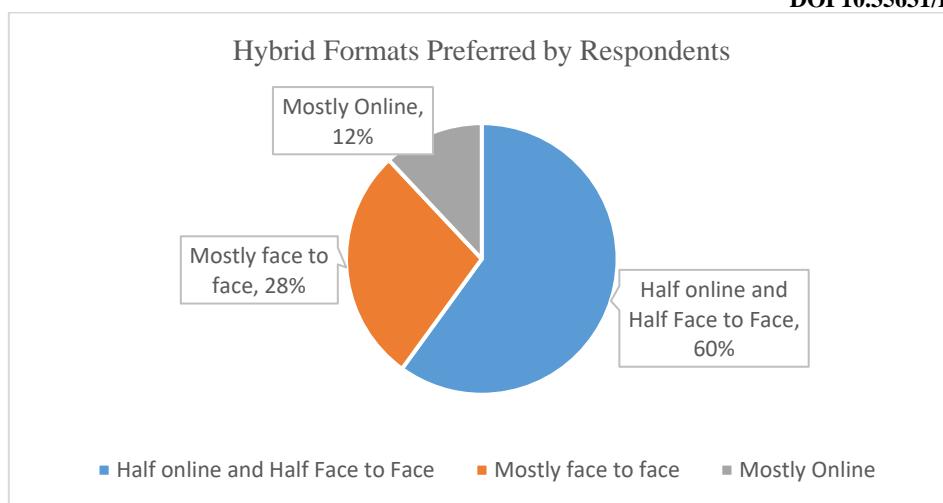
**Figure 2: Choice of Learning Mode Preferred by Respondents**

The above results (Table 1 and Figure 2) show that hybrid (61% of the respondents) is the most preferred choice of learning mode followed by completely face to face (39 % of the respondents) and completely online (0% of the respondents).

For those (25 out of the 41 respondents) who opted for the hybrid learning mode, they were asked to specify the hybrid format they would prefer. As shown in Table 2 and Figure 3, 15 of the 25 respondents (60%) who opted for the hybrid mode of learning prefer the hybrid format that offers 50% online and 50% face-to-face sessions. This is followed by 7 out of 25 respondents (28%) prefer the hybrid format that offers mostly face-to-face (a greater proportion of face-to-face compared to online sessions) and 3 out of 25 respondents (12 %) prefer mostly online (greater proportion of online compared to face-to-face).

**Table 2: Hybrid formats Preferred by Respondents**

Learning mode	Frequencies	Percentage
50% online and 50% face-to-face	15	60
Mostly face-to-face	7	28
Mostly online	3	12
Total	25	100



**Figure 3: Hybrid formats Preferred by Respondents**

Table 2 and Figure 3 above show that 60% (15 out of 25) prefer the hybrid format that offers 50% online and 50% face to face (also presented as ‘half online and half face to face’) followed by mostly face-to face (7 out of 25) (28%) and mostly online (3 out of 25) (12%) sessions.

#### ***Reasons for the Various Choices of Learning Modes***

The respondents were then asked to give the reasons for their preferred choice of learning mode. Below are some of the common reasons.

#### ***Hybrid Learning Mode (50% Face-To-Face and 50% Online Sessions)***

As shown above, 25 out of 41 respondents chose hybrid learning as their preferred learning mode. Out of these 25 students, 15 (60%) prefer the hybrid format that offers 50% face-to-face and 50% online sessions and the following student views reflect this phenomenon:

#### ***Certain Courses Need More Practical Exposure***

Some of the respondents indicate that they prefer the hybrid format that offers 50% face-to-face and 50% online sessions because this format gives an alternative to courses that need practical tasks. One respondent notes:

“I prefer the hybrid format that offers 50% online and 50% face-to-face classes when I am back to the campus when the semester reopens. Some lab assessments required technical skills that is needed by the industry. Although the online learning sometimes could drag some time because of technical problems and late participation of students. Yet, I could save up the time from not having to take any transportation, reading the lecture notes online and whenever I have questions, I could ask in the forum at the university website. It encourages my learning process as well as reduces risk of exposure to Covid”.

Other respondents have the view that the hybrid format that offers 50% face-to-face and 50% online classes gives different benefits as shown in the following comments:

“My most preferred hybrid format is 50% online and 50% face to face because both have their benefits for example, online learning helps us to do our assignments and quizzes online so that we only need to upload and need not print the hardcopy... that’s eco-friendly. Face to

face learning helps us learn especially for the subjects that require us to do tutorials in computer labs or for language classes, we have to write, listen and communicate with others”.

“I prefer the hybrid format of 50% face-to-face and 50% online. This is because 50% face-to face learning allows lab work to be carried out as lab practical is quite important for a science stream student. Therefore, we can’t do the lab practical if conducting courses fully online. I prefer the online component of this hybrid learning mode when there is more theoretical teaching”.

It can be deduced from these explanations that these respondents choose the hybrid learning mode mainly because they have the alternative to attend physical classes for courses that require more practical exposures and for those courses which require more statistical/mathematical explanation from their lecturers. Such views infer that online learning is not suited for courses that need hands-on practices similar to Dhawan (2020)’s view that students will not be able to practise and learn effectively when online content is all theoretical at times.

#### ***Saving Time, Eco-Friendly, And Convenient When Using Online Learning At The Same Time***

The participants note that online learning in the hybrid mode will suit those programmes that do not provide many practical exposures for students and at the same time, by doing the courses online, they can save some time for not needing to travel to and from classes and thus it is convenient learning from the comfort of their home. Some of them note that as they do not need to use hardcopies, this makes online learning eco-friendly. These views are reflected in the following comments.

“Overall, I think 50% online and 50% face-to-face learning would be good. Online learning is good... I think online learning of the hybrid mode makes everyone’s life simpler and convenient. Students and lecturers do not need to wake up early to class, they can get enough sleep”.

“The hybrid format I prefer the most is the one that offers 50% face-to face and 50% online sessions. For example, I think the 50% online sessions are quite suitable for PPIB course so that students don’t have to rush over here and there just merely to attend the lecture, this will save our time and the lecturer and students can just set a few dates for face-to-face lecture when necessary”.

#### ***Internet Service Is Quite Expensive To Afford***

Some respondents choose the hybrid format that offers 50% online and 50% face-to-face classes as their preferred choice of learning mode instead of the fully online option. This decision is based on the reluctance to spend additional cost to subscribe to the Internet or WIFI data and to buy electronic devices in order to access to educational resources and online classes. As stated by one respondent that if students continue to adopt online classes, “an allowance for Internet fees” would be helpful as shown in the following comment:

“Personally, I am down with the hybrid or blended learning mode. At first, I thought online class is a burden, but now I think I can fit myself with online learning of the hybrid

mode...But if we are to continue with online class of the blended mode, I think students should have an allowance for Internet fees”.

#### ***Poor Access Of The Internet In Rural Areas***

The same student continued that her preference for the hybrid format that offers 50% online and 50% face-to-face sessions is also due to her concern for students who live in rural areas with low or no accessibility of the Internet as reflected in her statement that “ ...This is also not fair for those students who stay in rural areas”.

#### ***COVID-19 SOP Concern***

Here, some respondents are of the view that a hybrid learning will provide an alternative, that is to replace a fully face to face class with an online one as a preventive measure against the spread of COVID-19 when the pandemic situation has not fully recovered. Consistent with this concern, Weeden & Cornwell (2020) in his paper gave an example on how universities are especially vulnerable spaces for the virus spread as it is a community transmission. The “community transmission” poses a particular challenge to higher institutions and campus life (Murphy, 2020, p.496). In view of the COVID-19 SOP concern, some participants express the following views:

“I prefer 50% face-to-face and 50% online learning (hybrid mode). In my opinion, any face-to-face class contains the risk of the spread of COVID-19, as the pandemic of COVID-19 in Malaysia is now getting unstable recently. By having 50% face-to-face and 50% online learning environment, I am expecting that the face-to-face class will be conducted in a smaller size group, and subjects taken by students from a few programs ought to be conducted via online learning. This is to prevent the spread of COVID-19 as it will be very troublesome once the virus spreads in campus. Hence, the safest learning environment would be online learning...”.

“I prefer the hybrid format that offers 50% face-to-face and 50% online classes because for me, sometimes it is a must to see the lecturer in person in order to better understand the lessons and sometimes it is a must to have online classes in order to avoid students from getting COVID-19 infection”.

#### ***Hybrid Learning Mode (Mostly Face-To-Face Learning)***

Out of the 25 students who choose hybrid learning as their preferred learning mode (see Table 2), 7 of them (28%) have given the following reasons for opting for the hybrid format that offers mostly face-to-face classes (a greater proportion of face-to-face compared to online sessions).

#### ***Mostly Face-To-Face Learning Mode Helps Students To Focus On Lessons***

Some of the respondents indicate that they prefer the mostly face to face approach in the hybrid mode as it helps them to “focus better” in the physical classroom as reflected in the following view:

“I prefer the mostly face-to-face hybrid format... we can take part in the Q and A session or express my concern to the lecturer regarding any issues”.

“I prefer mostly face-to-face hybrid format because I can focus better and will have fewer assignments. It will also be very helpful if some lecturers do not know how to use certain online learning platforms and we can just submit printed assignments to them”.

The above views suggest that students might have felt that impersonalized teaching via full online learning during the COVID-19 period has been a challenge as noted in Dhawan’s (2020) study that the absence of personalized teaching and learning is one of the three biggest challenges for online learning. Hybrid learning mode will permit a personalized teaching and learning process to a certain extent.

### ***Physical Presence Of Lecturer Enhances Learning***

One respondent felt that she can “better understand the lessons with the physical presence of the teacher” as shown in the following view:

“I prefer mostly face-to-face hybrid format because I can better understand the lessons with the physical presence of the teacher”.

### ***Mostly Face-To-Face Learning Is Free From Distraction During Online Classes***

Some respondents felt that they need the hybrid format that offers a greater portion of face-to-face compared to online sessions (most face-to-face) in order not to have the distractions they tend to have during online classes. Such phenomenon is reflected in the following view:

“I prefer the hybrid mode with mostly face-to-face learning component because I am more likely to focus in the classroom rather than online learning where I can be distracted by noises and the use of my phone round the clock”.

### ***Online Lesson In The Hybrid Mode As An Alternative To Physical Class Replacement***

Some of the respondents indicate that they prefer the hybrid format comprising a higher portion of face-to-face compared to online sessions (mostly face-to-face) as a small component of the hybrid format gives an alternative to “online tasks or pre-recorded lectures” and such learning mode allows “flexibility” in the teaching and learning process as shown in the following view:

“Based on my preference and ability to focus during a lecture, I would prefer the blended learning/hybrid mode with mostly face-to-face learning component. As a second-year student, going for the mostly face-to-face learning component enables us to focus on the lecture since we are physically in the class where we can hear our lecturer speaking and there are no external interruptions when the lecturer is explaining in front of the class. If the lecturer has a sudden plan which requires him to postpone or cancel the class, he can give us any online tasks or pre-recorded lectures in exchange of the face-to-face class. So, that is why I prefer the hybrid mode (mostly face-to-face learning) since the lecturer and students have the flexibility in the teaching and learning process”.

### ***Hybrid Learning Mode (Mostly Online Learning)***

The remaining 12% of the respondents (3 out of 25 respondents opt for the hybrid mode comprising mostly online learning). The following are some of the reasons given by the respondents.

### ***Enhancing Creativity And Originality***

Some students note that the mostly online learning component of the hybrid mode provides room in enhancing creativity and originality in learning as shown in a student's comment below:

"I prefer the hybrid mode with mostly online learning. Online lessons and assessments enable me to learn independently like googling for information and be creative in my work".

### ***Learning At Convenience***

The hybrid mode comprising mostly online learning as one of the two components is preferred for another reason that is, one can learn at his or her convenience as one student put it as "online learning makes everyone's life simpler and convenient":

"I prefer the hybrid mode with mostly online learning... I think online learning makes everyone's life simpler and convenient. Students and lecturers do not need to wake up early to class, they can get enough sleep".

In other words, learning at one's convenience provides flexibility in learning especially for asynchronous learning that is, students can schedule their own timetable to learn via videos and online materials prepared by their instructors. Such flexibility in learning is considered an interesting aspect of online learning that can contribute to students' learning potential via the hybrid method (Dhawan, 2020).

### ***Completely Face-To-Face Learning Mode***

Following the hybrid learning mode, the next preferred learning mode is completely face-to-face as shown in Table 1 that 16 out of 41 students (39% of the students) prefer to continue their studies via the completely face-to-face learning mode. Some of the reasons given by the respondents are presented below:

### ***Clear Explanation And Instant Response From Lecturer***

Respondents are in the view that completely face-to-face learning is effective due to the fact that students are able to "hear lectures clearly and directly ask the lecturer questions" as noted by a respondent as follows:

"I prefer completely face to face mode of learning because I can hear lectures clearly and directly ask the lecturer questions..."

### ***More Interaction Between Lecturer And Student***

Some respondents prefer classroom-based learning because they believe that completely face-to-face learning is more interactive than online learning. Similarly, another respondent feels that through completely face-to-face learning, he can "learn more effectively as there are more interactions between lecturers and students". It can be seen that this group of respondents does not find synchronous form of online learning (where participants can interact with their peers and instructors instantly via online platform) as effective as direct interaction in a physical classroom. The above phenomenon is reflected in the following comments:

"...I prefer completely face-to-face learning mode because it is more interactive and has less distraction"

“I prefer completely face-to-face learning environment because I believe that we can learn more effectively as there are more interactions between lecturers and students”.

### ***Good Solution For Poor Internet Connection***

Some of the respondents are in the view that poor Internet connection at their campus will make completely face-to-face mode of learning necessary as reflected in the following views.

“I hope that all classes are strictly physical because the Internet connection is bad in campus and that would affect my performance...”

“I do not like online learning when I go back to the campus, but there is no choice, I just go with the flow. But make sure campus provide high Internet connection”.

As shown in the data tabulation in Table 1 and Figure 2, no respondent has chosen fully online learning as their preferred choice of learning mode. This could be due to two main reasons as emerged in the interview data (as presented earlier), namely the high Internet cost incurred and the poor/low Internet connectivity at particular areas especially rural areas.

### **Discussion**

This paper attempts to analyse the perceptions students have about online learning, based on their experience during the MCO (Movement Control Order) period in Malaysia due to the COVID-19 pandemic. Perceptions were obtained on the students' intention in the use of online learning in the future that is, upon their return to the campus when they are in a position to do so and it also explores their preferred choice of learning. In this paper, the findings therefore attempt to answer research questions as stated earlier in the introduction section.

In this regard, the research shows that respondents demonstrate different preferences and views about their learning mode upon return to the campus. Most of the respondents 61% of the total respondents (25 out of 41 respondents) prefer the hybrid mode, that is the combination of face-to-face and online learning mode. A closer examination shows that the hybrid format that is most preferred is 50% face-to-face and 50% online learning (15 out of 25 respondents; 60 % of those who select the hybrid mode) followed by mostly face-to-face (7 out of 25 respondents; 28% of those who select the hybrid mode) and mostly online (3 out of 25 respondents; 12% of those who opt for the hybrid mode).

For the hybrid format that offers 50% online and 50% face-to face classes, respondents' selection for the format is based on the rationale that both the face-to-face and online components cater for different needs that is, face-to-face learning is best suited when the cost of the Internet subscription is quite expensive or when there is poor Internet connectivity or when there is a need to conduct courses which require more practical exposure. On the other hand, online classes are convenient, time-saving and eco-friendly. COVID-19 concern is another good reason to attend online classes instead of physical ones.

For the hybrid format that offers a greater proportion of face-to-face compared to online sessions, students' reasons for choosing this mode as their preferred choice of learning mode are, namely (i) the physical presence of the teacher helps students learn better (ii) the conducive classroom learning environment helps students to focus better in their lessons and (iii) a small

number of classes can be conducted online to replace face-to-face classes if the physical classes need to be postponed or cancelled.

As for the hybrid format that offers a greater proportion of online compared to face-to-face sessions (mostly online), respondents' selection for this hybrid format is based on the rationale that when more classes are conducted online, this can enhance their creativity, innovation and originality of ideas and at the same time, enable them to learn at their own pace.

As shown in the results, fully face to face learning mode is preferred by 39% of the respondents (16 out of 41). Students made this learning mode as their preferred one due to reasons such as clear explanation and instant response from their lecturer, more interaction between the lecturer and students and good solution for poor Internet access. However, some students are reluctant to opt for fully face-to-face learning mode as they are concerned about the possible spread of the COVID-19 virus among students in a physical classroom and the implementation of the SOPs (standard operation procedure) at the campus if the pandemic situation has not improved when they return to the campus.

No respondent has opted for the fully online learning as their preferred choice of learning mode. The two main reasons as reflected in the interview data seem to be related to the financial burden for having to subscribe to heavy Internet data and the poor/no Internet access at rural areas.

As can be seen from the interview data, respondents have both positive and negative views about online learning. The positive views have encouraged them to opt for more online learning in the future and the negative views have caused them to opt for less online learning. This is in line with the TAM model which shows that users' attitudes (comprising positive or negative feelings about their online learning developed over a period of time) can predict or help them decide on their intention to use online learning in the future. The positive attitudes are reflected in the respondents' positive feedback about online learning that is, online learning promotes convenience in learning, time-saving, eco-friendliness, creativity, innovation and originality. These positive attitudes have resulted the respondents opting for the hybrid format that offers a greater proportion of online compared to face-to-face sessions.

The negative attitudes are reflected in the respondents' negative feedback about online learning, namely there are (i) poor/no Internet connection in rural areas, (ii) additional cost incurred to subscribe to the Internet data, (iii) more distractions when learning online in a less conducive learning environment, (iv) less physical interaction between teacher and students and (v) fewer opportunities to provide practical exposure for certain courses. These negative feelings have influenced the respondents' intention to opt for future learning modes that comprise either no online learning or less online learning. These students' preferred choice of learning mode is either fully face to face (no online learning) or the hybrid format that offers a higher proportion of face to face compared to online sessions (also known as 'mostly face-to-face' in this study).

The findings of the present study show that the majority of the respondents are not interested (as shown in the lower percentage in Tables 1 and 2; Figures 2 and 3) in having classes with the hybrid format that offers a greater proportion of online compared to face-to-face sessions (mostly online) or the fully online learning mode in the future. These findings are however in

contrast with a study done at the Maryland State University which yields the results that the majority of the respondents are interested in taking fully online courses in the future.

The present findings further point out that fully online learning is not opted by any of the respondents and thus this suggests that it is the least preferred learning mode among the respondents. Such reluctance to opt for fully online classes in the future can be resulted from the negative online learning experiences students had during the MCO period such as having poor Internet connection and spending additional cost to purchase the Internet data. In contrast to the above present finding, in a Maryland State University study, fully classroom learning instead of fully online learning is found to be the least preferred learning mode. In addition, the present findings show that the first priority of the respondents is the hybrid form of learning mode, followed by fully face-to-face and fully online.

These research findings are indicative that in the near future most students will be opting for hybrid form of learning mode considering students have developed both the positive and negative attitudes associated with their online learning experience. It can be deduced from these findings that if the Internet connectivity can be improved and the cost incurred for the Internet service can be subsidized, online learning would be the preferred choice of learning mode for more students. In this aspect, the institutional support can help promote a more effective online learning by improving on the learning management system of the higher institution.

Another factor which will promote the online learning among students is the COVID-19 issue whereby the online learning would be a safe learning option to prevent the spread of the virus. This study thus shows that institutional support, technology accessibility and COVID-19 concern are three of the external factors that have affected the respondents' attitude and intention in choosing their preferred choice of learning mode in the near future.

By the principle of TAM model, external factors are said to affect the perceived usefulness (PU) and perceived ease of use (PEU) and these two elements further affect the attitude (be it negative or positive feelings) one forms towards online learning (Al-Gahtani & King, 1999). In this study, the findings have demonstrated how the attitudes (both positive and negative) of the students have influenced their decision to use online learning (hybrid mode of learning is most preferred) and their attitudes are contributed by the external factors they experienced during the MCO period. It can be deduced from the findings that, the decision about using online learning in the future is influenced by the respondents' attitudes and the three external factors.

## Conclusion

This paper attempts to explore students' perceptions on online learning. Perceptions were obtained from students at a local university in Malaysia and the Technology Acceptance Model (TAM) was used as the theoretical framework for this paper. The main finding of this paper is that online learning is perceived to be useful. This usefulness includes students can learn at their convenience and such learning saves students' time for not needing to travel to the physical classes and promotes creativity as well innovation in learning. However, at the same time, students experience some limitations in online learning such as additional cost incurred for the Internet or WIFI usage, poor or no Internet accessibility at some areas especially the rural areas and distractions they tended to have when learning online from a less conducive learning environment at home.

This research further shows that in spite of the above limitations of online learning, the hybrid mode of learning which involves the use of some extent of online learning alongside face-to-face learning, is the most preferred learning mode upon students' return to the campus when the pandemic situation has improved. A closer examination shows positive attitudes towards online learning have influenced their choice in opting for hybrid format that offers 50% online and 50% face-to-face followed by mostly face-to-face (a higher proportion of face-to-face compared to online sessions) and mostly online (a higher proportion of online compared to face-to-face sessions) sessions. Consistent with Barboni's (2019) view that although face-to-face instruction method is valuable but online learning can go alongside the transitional methods to "bring in efficiency, effectiveness, and competitive edge over other competitors by imparting quality education" (Barboni, 2019, cited in Dhawan, 2020, p. 12). The present findings also show that institutional support, technology accessibility and COVID-19 concern are the three external factors that have influenced students' attitude and intention to use online learning in the future. Future studies that include a bigger sample size are suggested in order to obtain more comprehensive findings. In addition, future studies can extend the present study by looking into the different factors that influence university students' readiness to learn online using Pearson correlation analysis to measure the association between the selected independent and dependent variables.

## References

- Al-Gahtani, S., & King, M. (1999). Attitudes, satisfaction and usage: Factors contributing to each in the acceptance of information technology. *Behaviour and Information Technology*, 18(4), 277–297.
- Allen, I., & Seaman, J. (2003). *Sizing the opportunity: The quality and extent of online education in the United States, 2002-2003*. Needham, MA: Sloan.
- Barboni, L. (2019). From shifting earth to shifting paradigms: *How webex helped our university overcome an earthquake*. CISCO, Upshot By Influitive.
- Bereiter, C. (2002). *Education and mind in the knowledge age*. Hillsdale, NJ: Erlbaum.
- Bonk, C. J., & Graham, C. R. (2012). *The handbook of blended learning: Global perspectives, local designs*. New York: John Wiley & Sons.
- Buzzetto-More, N. (2015). Student attitudes towards the integration of youtube in online, hybrid, and web-assisted courses: An examination of the impact of course modality on perception. *MERLOT Journal of Online Learning and Teaching*, 11 (1), Retrieved January 8, 2022 from [http://jolt.merlot.org/vol11no1/Buzzetto-More\\_0315.pdf](http://jolt.merlot.org/vol11no1/Buzzetto-More_0315.pdf)
- Davis, F. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13 (3), 319-340.
- Davis, F. D., Bagozzi, R. P. & Warshaw, P. R. (1989). User acceptance of computer technology: A comparison of two theoretical models. *Management Science*, 35(8), 982-1003.
- Dhawan, S. (2020). Online learning: A panacea in the time of COVID-19 crisis. *Journal of Educational Technology*, 49(1), 5-22. <https://doi.org/10.1177%2F0047239520934018>
- Dziuban, C., Moskal, P., & Hartman, J. (2005). *Higher education, blended learning, and the generations: Knowledge is power: No more. Elements of quality online education: Engaging communities*. Needham, MA: Sloan Center for Online Education.
- Fabriz, S., Mendzheritskaya, J. & Stehle, S. (2021). Impact of synchronous and asynchronous settings of online teaching and learning in higher education on students' learning

- experience during COVID-19. *Frontiers in Psychology.* 12, 1-16.  
<https://doi.org/10.3389/fpsyg.2021.733554>
- Garrison, R. R., Archer, W. & Anderson, T. (2003). *E-Learning in the 21st Century: A framework for research and practice.* London: Routledge/Falmer.
- Graham, C. R., & Dziuban, C. (2008). Blended learning environments. In M.J. Bishop, M. J. (Ed.). *Handbook of research on educational communications and technology* (pp.269-276). New York: Lawrence Erlbaum Associates.
- Gridley, H., Cohen, L., Darlaston-jones, D., Cohen, L., Darlaston-jones, D., Gridley, H., & Breen, L. (2009). The Australian community psychologist. *Journal of Australian Psychological Society,* 19(1), 19–25.
- Kalpana, V. (2010). *Future Trends in E-Learning.* Paper presented at the IEEE 2010 4th International Conference on Distance Learning and Education (ICDLE).
- Khalil, R., Mansour, A. E., Fadda, W.A., Almisnid, K., Aldamegh, M., Al-Nafeesah, A., Alkhailifah, A., & Al-Wutayd, O. (2020). The sudden transition to synchronized online learning during the COVID-19 pandemic in Saudi Arabia: A qualitative study exploring medical students' perspectives. *BMC Medical Education,* 20 (285), 1-10.  
<https://doi.org/10.1186/s12909-020-02208-z>
- Kocur, D., & Kosc, P., (2009). E-learning Implementation in Higher Education. *Acta Electrotechnica et Informatica,* 9(1), 20-26.
- Legris, P., Ingham, J., & Collerette, P. (2003). Why do people use information technology? A critical review of the technology acceptance model. *Information & Management,* 40, 191–204.
- Mamattah, R. S. (2016). Students' perception of e-learning. Master thesis submitted to Linköping University.
- Masrom, M. (2007, May). *Technology acceptance model and e-learning.* Paper presented at the 12th International Conference on Education, Sultan Hassanal Bolkiah Institute of Education, Universiti Brunei Darussalam.
- McGreal, R., & Elliott, M. (2004). Technologies of online learning (e-learning). In T. Anderson, & F. Elloumi, *Theory and practice of online learning,* (pp. 115-135). Athabasca University.
- McLoughlin, C., & Lee, M. J. (2007). Social software and participatory learning: Pedagogical choices with technology affordances in the Web 2.0 era. *ICT: Providing choices for learners and learning. Proceedings asciite Singapore,* 664-675.
- Murphy, M.P.A., (2020). COVID-19 and emergency eLearning: Consequences of the securitization of higher education for postpandemic pedagogy. *Contemporary Security Policy,* 41 (3), 492-505.
- Ong, C. S., & Lai, J. Y. (2006). Gender differences in perceptions and relationships among dominants of e-learning acceptance. *Computers in Human Behavior,* 22, 816–829.
- Singh, V., Thurman, A. (2019). How many ways can we define online learning? A systematic literature review of definitions of online learning (1988-2018). *American Journal of Distance Education,* 33(4), 289–306.
- Weeden, K., & Cornwell, B. (2020). The small-world network of college classes: Implications for epidemic spread on a university campus. *Course Enrollment Networks.* 7, 222-241.