The Relationship between Online Learning and Digital Media with Students' Academic Attitude

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Abstract
This study was conducted to determine the relationship between online learning and digital media on students' academic attitudes. The respondents were 476 secondary government school students in the state of Sabah, Malaysia. This study used Technology Acceptance Model (TAM) as the basis of the research. Pearson Correlation analysis was performed using SPSS software to test the research's hypotheses. The findings of the study show that there is a significant correlation between online learning ($r=0.407$, $p=0.000$) and digital media ($r=0.410$, $p=0.000$) with students' academic attitudes. The results also show that mean scores for all the variables were greater than 3.0, ranging from 3.22 to 3.95. This indicates that all variables show positive responses. Therefore, teachers should use and apply online learning and digital media efficiently and effectively in order to provide an optimal impact on students' academic attitudes.
Keywords: Online Learning, Digital Media, Academic Attitude

Introduction
The whole world has been shocked by the outbreak of Covid-19 which has infected around millions of people worldwide. Malaysia is no exception with thousands of people have been infected with this epidemic. To curb the epidemic from spreading further, the government has implemented the Movement Control Order (MCO) which has forced schools to close. This definitely had affected the teaching and learning (T&L) sessions of the students. Therefore, to continue student learning, the Ministry of Education Malaysia has asked teachers to take the initiative to implement online T&L sessions by using various platforms such as Google Classroom, Google Meet, Telegram, WhatsApp, and others to replace conventional face-to-face T&L sessions (Abdullah *et al.*, 2020). However, not all students can attend T&L sessions online due to some constraints such as no internet network, poor internet network, lack of ability to subscribe to internet network or do not have the appropriate hardware to surf the internet such as mobile phones or laptops. Therefore, this is likely to affect the academic attitude of the student.

This study holds significance due to its focus on the relationship between students' online learning, digital media, and academic attitude. Student's academic attitudes may vary as they participate in remote teaching and learning sessions at home during the implementation of movement control order (MCO). This challenge poses itself for educators

who must ensure that students remain engaged in learning, even in the absence of traditional in-person class. Since Covid-19 has been affected the world, online learning has emerged as a prominent alternative to face-to-face instruction. Therefore, the utilization of digital media is anticipated to yield a positive impact on students' academic attitudes, particularly in terms of stimulating their interest in learning.

Some of the challenges outlined are the administrator's assessment, communication issues that limit social interaction during an online learning session, technical issues, lack of Internet connection and insufficient data capacity (Salleh *et al.*, 2020). In addition, other issues raised were the lack of motivation, preferences, intention, and students' level of understanding about online learning. Since there is limited interaction between educators and students during online learning, hence, online meetings should be conducted so that students can discuss course matters to develop a better understanding of the subject. Students should be given simple assignments so that they meet the expectations of remote learning. Overall, the challenges can be overcome by improving the online learning method, such as flipped classroom and the learning management system (Azleen *et al.*, 2020).

According to Samat *et al* (2020), there are four out of five determinants (performance expectancy, effort expectancy, social influence, facilitating condition and intrinsic value) found to be significantly related with the behavioural intention of the students to use online distance learning. Behavioural intention also was found to be significant with use behaviour. Therefore, the one-size-fits-all approach in the implementation of ODL is not applicable as this not only hinders the flow or the content delivery within the virtual classroom, but this also affects the psychological well-being since users are prone to get distressed.

In addition, the online learning conducted is also not able to implement some T&L methods that are commonly carried out such as group discussions, simulations, demonstrations, experiments, acting and so on that have been proven effective (Taat *et al.*, 2020). It is replaced by the use of digital media such as You-tube, power point slides, games and others. Among other constraints faced when learning at home are the possible lack of focus that can be given, interference from other family members, and no suitable and comfortable space for learning, let alone for less affluent families and only small sized homes. When it comes to online related, not all students have good internet connection, nor can all afford to have enough and comfortable internet connection for online learning. Issues related to students' academic attitudes are often associated with the T&L process implemented by teachers. Logically, while T&L is implemented by teachers face-to-face in the classroom, it is still difficult for the school or teacher to fully form a positive academic attitude of students, let alone T&L conducted face to face that is online. Nonetheless, those are preliminary assumptions that have yet to be empirically proven based on evidence from authentic studies. Therefore, this study can offer valuable insights to teachers and school administrations regarding correlation between online earning, digital media, and students' academic attitude. The findings from this study will assist teachers in making informed decision about the continuation of online learning. This also applies to the utilization of digital media during online learning. The proficient and strategic integration of digital media has been demonstrated to capture students' attention, thereby contributing to enhanced academic achievements.

Research Objective
a) To identify the online learning, digital media, and students' academic attitude.

b) To determine the correlation between online learning and digital media with students' academic attitude.

Research Hypothesis

Ho[1] There is no significant correlation between online learning with students' academic attitude.

Ho[2] There is no significant correlation between digital media with students' academic attitude.

Literature Review

Academic Attitude

According to Robbins and Coulter (2007), attitude is the statement of an evaluation of whether it is favourable or unfavourable about objects, people, and events. This statement has continuity with the statement of Kotler and Keller (2009) who say attitude is a long-term assessment of things a person likes or dislikes including feelings and tendencies to action towards certain objects. To discuss the problem of academic attitudes more clearly and specifically, researchers divide students' attitudes into three components, namely cognitive, affective, and behavioural (Taat *et al.*, 2021). This attitude is known as the tricomponent attitude. Tricomponent attitudes refer to three components of attitudes namely cognitive, affective, and behavioural (Schiffman *et al.*, 2010). Cognitive attitudes are the perceptions, knowledge, thoughts, and beliefs held by an individual as a result of direct experience and information from various sources. Affective attitude refers to feelings towards something through positive or negative evaluations. While behavioural attitude is the tendency of a person to behave or make any particular action. The main problem of students' cognitive attitudes is about students' negative perceptions of learning conducted at home. While the problem of students' academic affective attitude can be identified from various aspects involving negative feelings to continue and implement learning sessions alone in their homes without the presence of teachers and classmates as usual (before MCO). As for the problem of student behaviour, negative academic behaviour is less attention and less focus in the T&L process conducted online by teachers which may be due to internet line disruption and environmental disruption at home. However, it is also possible that there are students who prefer to study online alone at home because there is no interference from other friends and in a relaxed and free atmosphere such as being able to eat and drink during T&L sessions implemented because they are at home.

Online Learning

Online learning is the use of the latest technology to improve the level of learning. This learning environment uses physical hardware such as computers or smartphones and internet lines. Online learning is a teaching and learning process that uses electronic networks (LAN, WAN, or Internet) to deliver content, information and also interact through it. Internet, intranet, satellite, audio-video tape, interactive TV, and CD-ROM are some of the electronic media used to practice e-learning. This method allows students to use online learning to obtain the desired information (Rader and Wilhelm, 2001; Marsudi, 2016). The use of online learning provides a broad learning impact or opportunity to students through active, interactive, collaborative student involvement and promotes lifelong learning (Pham *et al.*, 2019). The learning experience that can be gained through the use of e-learning is not limited by the classroom alone; even its use can add value to learning if managed in an appropriate

learning environment. These values are exploration, experience engagement, empowerment, effectiveness, expanded and ease of use.

Online learning refers to the delivery of education and training through digital resources where the internet is used in delivering 80–100% of the content. Online learning is classified as asynchronous or synchronous formats. The asynchronous format involves the delivery of T&L materials via institutional e-learning platforms or with the use of other T&L applications such as email or WhatsApp. The materials are then accessed at the student's convenience (Satar *et al.*, 2020). On the other hand, the synchronous format involves online T&L conducted using real-time video webinar platforms or chat-based media like Microsoft Teams®, WEBEX®, Skype®, Zoom® or WhatsApp®. Lecturers and students can have face-to-face tutorials or discussions like a classroom setting. The medium enables users to stay in touch with their lecturers or fellow students. Synchronous learning also facilitates dynamic learning where the lecturer demonstrates certain procedures to students and have two-way communication online. The teaching time and topic are given earlier allowing students time to adequately prepare before attending the scheduled online teaching class A 'flipped classroom' is best to describe this approach (Zuky *et al.,* 2020).

Digital Media
Media has two classifications namely print and non-print media (Salsidu *et al.*, 2018). Non-print media is divided into two, namely live and non-live media. Broadcast media are motion and rigid broadcast media. Digital according to Meilani (2014), is defined as Binary Digit or Bit data represented from a state of binary numbers consisting of the numbers 0 and 1 or on and off. In conclusion, digital media is a non-print media that is a projected and non-projected media that uses bit data. According to Nayyar and Watson (2016), digital media are products and services that result from the media, entertainment, and information industries. Digital media can be categorized into three main categories namely, a) digital content such as text, audio, video and images, b) digital platforms such as applications and websites, and c) services such as information, entertainment, and communication. The digital media referred to in this study is the use of non-print media that uses bit data, namely projected media and non-projected media consisting of digital content, digital platforms, and digital services. Online learning implemented by teachers involves the use of various digital media such as You-tube, Games, movies, etc. to replace the conventional face-to-face method. So, this study will look at students' perceptions of the use of digital media and its impact on students' academic attitudes.

This study will use the Technology Acceptance Model (TAM) developed through the adaptation of Theory of Reasoned Action (TRA), as the basic framework to this study. TAM is a model developed and introduced by Fred Davis since 1986. According to Davis (1989), this model is used to predict the acceptance of technology use based on two elements namely Perceived Usefulness (PU) and Perceived Ease of Use (PEOU). In this model there are technology acceptance factors that need to be considered. The acceptance of a successful information system or technology is not only determined by the information processing system well but also determined by the level of individual acceptance of the application of the information system or technology.

In summary, the literature review shows many benefits of online learning and digital media on academic attitudes. The research hypotheses that have been constructed in this study also refers to the highlights of the literature. Nevertheless, past studies have mostly taken samples from urban school students, and at universities who implement online learning

in lecture rooms, libraries or in their respective campus areas who undoubtedly have adequate and good infrastructure facilities. Studies involving school students, especially rural schools as respondents are still very poorly implemented, let alone involving a more comprehensive study population of students in urban and rural areas.

Methodology
Research Design
This study used a survey method which applied the quantitative approach to collect the data. A set of questionnaires was used as the research instrument. The questionnaire items were constructed and developed by the researchers who are experts in this field of study, with referred to existing theories and models. All the questionnaires used a 5-point Likert scale (1=Strongly Disagree, 2=Disagree, 3=Not Sure, 4=Agree, 5=Strongly Agree). Then the questionnaire has went through a rigorous process of validity and reliability to ensure that the items can measure what should be measured.

Sample
The study involved 476 secondary government school students from the state of Sabah, Malaysia. This number is sufficient to represent the total population of 5000 students (Bartlett *et al.*, 2001). This amount is also adequate to perform descriptive and inferential analysis to answer the research hypothesis. The quantitative data were analysed descriptively (mean score and standard deviation) and inferentially (Pearson Correlation). The data involved in this study are continuous data that allow descriptive and inferential analysis to be performed.

Instrument
The instruments of this study were self-constructed by the researchers and have confirmed their validity and reliability. The constructed questionnaire has gone through the process of face validity, content validity and construct validity, prior to reliability analysis. For face and content validity, several discussions have been carried out and content experts have reviewed and validated the constructed items. Construct validity using factor analysis showed that all the items have loading factor more than 0.50, which according to Hair *et al.* (2010) can be retained. For reliability, Cronbach Alpha showed the value of more than 0.80, which indicated that the instrument has high reliability.

Findings
Descriptive Analysis
The descriptive statistics for each variable are shown in Table 1. All mean scores were greater than 3.0, ranging from 3.22 to 3.95. This indicates that all variables show positive responses. The standard deviations for all variables were less than one and this indicates that the item scores were around the mean scores. The normality test using skewness and kurtosis show that all the variables are normally distributed. The value of skewness and kurtosis for all variables are within the accepted range which is -1 until +1 (Hair *et al*., 2010). Therefore, the assumption for inferential statistics is fulfilled.

Table 1
Descriptive Analysis

Variables	Mean	SD	Skewness	Kurtosis
Online Learning	3.22	.784	.065	-.332
Digital Media	3.75	.628	-.328	-.034
Academic Attitude	3.95	.711	-.590	.246

Inferential Analysis
To determine the relationship between the independent variables which are online learning and digital media with the academic attitude of the respondents, Pearson correlation analysis was conducted. The findings show (Table 2) that there is a significant and positive relationship between the online learning (r = 0.407, p = 0.000) and the digital media (r = 0.410, p = 0.000) with the academic attitude. Therefore, both null hypotheses are rejected. This means that when the online learning and digital media are positive, then the academic attitude of the students is also positive. The finding also explains that the relationship between the digital media with students' academic attitude is stronger as compared to the relationship between online learning with their academic attitude.

Table 2
Pearson Correlation Analysis

Variable		Online learning	Digital Media
Academic Attitude	Pearson Correlation	.407**	.410**
	Sig. (2-tailed)	.000	.000
** significant at the level of <0.01			

Discussion
The findings show that there is a significant correlation between online learning and the use of digital media on the students' academic attitude. These findings prove that the two independent variables of the study affect the dependent variable significantly. Indeed, online learning is the best alternative that can be used during the covid-19 pandemic (Abdullah *et al.*, 2020; Chung *et al.*, 2020). Although there are some constraints or obstacles to implement online learning, it is still the main option especially for students who have access to the internet. The effectiveness of online learning can be enhanced by the seriousness shown by teachers when conducting online classes. Most of the respondents stated that their teachers gave unwavering commitment and gave good presentations during online classes. This situation clearly shows that students' academic attitude, especially their motivation and interest, can be formed effectively if this online learning is implemented well and wisely (Chung & Mathew, 2020). Teachers as facilitators must be smart and creative when implementing the online teaching and learning process (Apak *et al.*, 2021). Diversifying teaching materials or resources, in addition to giving full commitment will have a positive effect on students' academic attitudes (Charlie *et al.*, 2017).

Apart from that, the findings also show that the correct and appropriate use of digital media will have an impact on students' academic attitudes. The use of digital media will be able to motivate students, since they who are already exposed to various technology applications and gadgets in various daily affairs (Ramli *et al.,* 2020). Conventional media is no longer relevant and has less impact on the current generation. For students in the city who can access the internet well, there is no problem for them to use whatever digital media is

available. However, not all students in the city are able to access the internet well because of its higher cost (Yusuf & Ahmad, 2020). As for the rural students, where the internet network is quite limited, they prefer if the teachers use digital media that does not require high bandwidth or speed. In addition, teachers should be smart and creative when using digital media so as not to bore students.

Digital media is an important platform for online learning to go through before online learning can have a better impact, compared to the impact given without digital media (Salsidu *et al.*, 2018). Therefore, it is important for teachers to understand this matter in order to help them implement the teaching and learning process more efficiently and effectively. The proposed SEM model can be referred to future research. Since the proposed model fit with the obtained data, this proves that the model is valid and reliable. The model significantly shows that the constructed questionnaire items able to measure all the variables in this study. Besides that, the model also shows significant direct and indirect effects of the exogenous variables on the endogenous variables. Therefore, this model is an important contribution of this study to the academia at large.

Conclusion

In conclusion, online learning and digital media are the best alternative or platforms to face-to-face classes. Teachers should increase their knowledge and skills to implement online class sessions. Teachers also need to be committed and creative so that the T&L session will be able to attract the interest of students to attend online learning classes and finally be able to achieve the learning outcomes. In addition, the relevant parties must ensure that all students, whether in or outside the city, have access to good internet so that online classes can run smoothly. The academic attitude of students is very important to be formed and strengthened so that they are always highly motivated in their studies and eventually succeed in the future.

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