The Acceptance of Focused Educational Video Sharing and Social Media Platforms For Learning

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ABSTRACT

This study aims to analyse the factors that influence the students' acceptance towards focused educational and social media video sharing sites. The acceptance factors were studied based on the Technology Acceptance Model (TAM) constructs, namely, perceived usefulness, perceived ease of use, and the attitude towards use and behavioural intention. In this study, a series of learning software video tutorial in the form of screencast has been developed and uploaded to two video sharing platforms, which were the focused educational video sharing site (LearnSoftware) and social media-based video sharing site (YouTube). A questionnaire has been used as an instrument to compare and analyse the level of students' acceptance towards both forms of video sharing platforms based on the original construct of the TAM developed. Quantitative research method was used and data were collected from 294 students that major and minor in Multimedia studies from five Public Higher Learning Institutions. The t-test statistical analysis was utilised to examine the different levels of students' acceptance towards both forms of video sharing sites, where a significant difference was found in the levels of acceptance between YouTube and LearnSoftware sites in the aspects of their perceived usefulness, perceived ease of use and behavioural intention. Meanwhile, there was no significant difference found in terms of the attitude towards use.

Keywords: *Focused educational video sharing site, YouTube, TAM, New media.*

I. INTRODUCTION

The use of technology in the context of education has a positive impact on the teaching and learning process [1] Its use as a multimedia-based teaching material that combines elements of text, graphics, audio, video and animation that has the potential to contribute to a more interactive learning style as the new media technology evolves. The process of multimedia based learning is much more enjoyable than traditional learning methods. Video is one of the most effective elements of multimedia in influencing interest and having a positive impact on the teaching and learning process [2] Today, it is widely used as a teaching tool to enhance student interest and motivation for learning. There are various forms of learning video content to create meaningful and enjoyable learning such as video screencast, animation, documentary and more.

In line with the development of new media technologies, the existence of various video sharing sites is seen as crucial to supporting the process of video-based teaching and learning. Video sharing sites are web services that allow users to upload and share their videos in various ways such as by email, blog or through social media networks [3]. From an educational standpoint, the existence of these pages has facilitated the sharing of video learning, while also solving large-scale video transfer and storage issues. Some examples of video sharing sites available today are YouTube, Vevo, Dailymotion and others.

In general, educational video sharing sites allow only registered users of students, teachers or parents, and do not allow access to amateur videos that are not educational. In addition to sharing instructional videos on specific learning topics and lecture videos, faculty can also provide quizzes and notes as well as share classroom and exam information through this site [3] Therefore, the provision of this site in schools or educational institutions is necessary to enable educators and students to share video-based learning materials more effectively [4] various educational video sharing sites have been developed to support the teaching and learning process of various branches of education such as science, math, language English, and so on. Therefore, the need for the use of educational video sharing sites is seen as very important and in line with the current information and media-based learning and style of learning.

YouTube is also widely used for teaching and learning purposes, it is undeniably a great platform for students and teachers alike in their learning process. This is because the video elements used can capture the interest, attention and motivation of students [5]The ease of sharing videos on the YouTube site also

facilitates the storage and transfer of large-scale video-based learning materials [6] YouTube is generally well-known for its user-directed video collection of videos that show how a task is performed step by step [8] As such, it makes it easier for students to find video tutorials or explanations of a concept in various subjects such as software tutorials, math tutorials, statistics and so on [7]. This study aims to analyze the factors that influence the students' acceptance towards the two platforms of video based learning which are educational video sharing site named Learnsoftware and social media video sharing sites named YouTube.

A. Technology Acceptance Model (TAM)

TAM was chosen as the basic model in this study because it is a very influential research model over the past decade. Previous studies have made some improvements on it and extended the original TAM model. TAM was used in this study because of its advantages; it is an established model and was built specifically for studies application that involves the use of technology [8]. TAM has also been tested and applied extensively in studies that involve the acceptance of new media [9]-[11] and online learning [12]-[16] . Its use is very widespread and proved to be very useful in a variety of empirical studies in determining the intention of an individual towards the acceptance and use of technology in various fields of information technology and information systems studies [17]-[22]. TAM is a theory expanded from the Theory of Reasoned Action (TRA), which was introduced by [23] and [24].

TAM was developed to explain how users accept and use a certain technology while taking into account the factors of consumer behaviour [25]. This model states that when consumers were introduced to a new technology, there are several factors that will affect their decision on how and when to use the technology. TAM was chosen as the basic model in this study because it is a very influential research model over the past decade. Previous studies have done some improvements on it and have extended the original TAM model.

TAM was used in this study because of its advantages such as this model has been established and was built specifically to be applied in the studies involving the use of technology TAM has also been tested and applied extensively in the studies that involve acceptance of new media [26] and online learning [12]. Its use is very widespread and proved to be very useful in a variety of empirical studies in determining the intention of an individual towards the acceptance and use of technology in various fields of information technology and information systems studies [27,28]. There are five constructs in the original model of TAM; Perceived Usefulness, Perceived Ease of Use, Attitude Towards Using and Behavioural Intention.

B. Perceived usefulness

Perceived usefulness refers to consumers' belief that using the technology or system will improve their work performance [28]. Findings from previous studies show that, based on the TAM model, the perceived usefulness factor influences attitudes toward consumption and the intention to act. This means that if an individual feels that the technology introduced is very useful to him or her, then that person will respond positively to the technology, and thus intend to use it. In addition, external factors are also added to the TAM model to influence a user's usage of a technology [29].

Based on the focus of this study, perceived usefulness refers to the benefits of educational and YouTube video sharing sites, where students would consider using these sites to benefit themselves for learning purposes. If a student finds a site to be useful, the student will respond positively to the site and intend to use it. Therefore, perceived usefulness is very important to investigate the students' acceptance of educational video sharing and social media platforms.

C. Perceived ease of use

Perceived ease of use refers to the consumer's belief that the technology or system introduced can be used easily and is problem-free [28]. Findings from previous studies indicate that the ease of use contributes to the acceptance or rejection of a new technology because researchers have found that the level of consumer acceptance of a given technology increases when the system developed is easy to use [28]. In this study, the impression was easily detected, which refers to the students' perception of the educational video sharing site and social media platform, whether it was easy or difficult to use. Students will respond positively to both platforms if they find them easy to use and will subsequently use it for learning purposes.

D. Attitude towards use

Attitude is defined as the positive or negative reaction exhibited by an individual to a particular behaviour [24]. According to [28], the attitude towards use is the measure of an individual's assessment of an individual's self-related system. This construct is originally based on the theory of reason action that states that an attitude occurs due to the belief of an individual that motivates the behaviour [30]. The findings from previous studies on technology adoption have shown that attitudes are influenced by factors, such as perceived usefulness and perceived ease of use, because when users find an introduced technology to be very useful and easy to use, it promotes a positive attitude in users towards adopting the system. In turn, this positive attitude will encourage

PHLI	Sample
1. Universiti Utara Malaysia (UUM)	51
2. Universiti Pendidikan Sultan Idris (UPSI)	60
3. Universiti Putra Malaysia (UPM)	43
4. Universiti Sains Islam Malaysia (USIM)	80
5. Universiti Teknikal Malaysia Melaka UTEM)	60
TOTAL	294

the user's behaviour to use the system.

In this work, the attitude towards use refers to the attitude expressed by students when introduced to the educational and social media video sharing sites. This attitude is influenced by their perception of whether this site is useful for their study and easy to use, or otherwise. Subsequently, the student's positive or negative attitude towards both sites will determine the student's attitude in making the decision to accept or reject the use of this site for learning purposes.

E. Behavioural intention to use

Behavioural intention to use is a measure of an individual's decision to act or not in performing a certain behaviour in the future [28]. In previous studies related to the adoption of technologies that used the TAM model as a basic model, one's behavioural intentions were also influenced by perceived usefulness, perceived ease of use, attitude toward use, and external factors that were relevant to the context of the study. According to the study conducted, behavioural intentions indicate the desire of a student to use the educational video and social media video sharing site for the purpose of learning. Their intention to use both sites is influenced by the positive or negative attitude of the students towards the acceptance of the sites.

II. METHODOLOGY

This study uses a quantitative approach by conducting a survey methodology. The study instrument used was a questionnaire developed based on previous questionnaire that had applied TAM model in studies on the acceptance of new media, e-learning, social media, and education. The subject of study was the students of Bachelor of Multimedia (major or minor) programme at the Public Higher Learning Institutions (PHLIs). The students were selected based on the study requirements, where the subjects had used video sharing sites to study the multimedia software tutorials. A series of learning software video tutorial in the form of screencast has been developed and uploaded to two platforms of video sharing, which were the focused educational video sharing site (LearnSoftware) and the social media-based video sharing site (YouTube), both for the purpose of

investigating the students acceptance on using these platforms for learning purposes.

The study population was 20 PHLIs all across Malaysia, where these PHLIs had been identified to offer Multimedia Programmes (major and minor). From the total population, five PHLIs had agreed to collaborate in this study, as shown below:

Table 1. Total population sampling

III. ANALYSIS AND FINDINGS

The t-test analysis method was selected to conduct on the groups of the same students who had been divided into different categories to evaluate two different parameters, namely, YouTube and LearnSoftware. This analysis aimed to assess the differences in students' acceptance of YouTube and LearnSoftware that is measured in TAM's original constructs from the aspects of perceived usefulness, perceived ease of use, attitude towards use, and behavioural intention.

Table 2. Research hypotheses

Ha[1]   There is a significant difference in the influence on perceived usefulness between YouTube and LearnSoftware.

Ha[2]   There is a significant difference in the influence on perceived ease of use between YouTube and LearnSoftware.

Ha[3]   There is a significant difference in the influence on attitudes towards use between YouTube and LearnSoftware.

Ha[4]   There is a significant difference in the influence on behavioural intention between YouTube and LearnSoftware.

A. The analysis of hypothesis Ha[1]
Table 3. The Result of group statistic

	Group	N	Mean	Std. deviation
Perceived usefulness	YouTube	294	4.09	0.63
	LearnSoftware	294	4.38	0.60

Table 3 shows significant test results (t = -5.60, df = 586, p < 0.5). There is a difference between both YouTube and LearnSoftware in terms of their perceived usefulness with a mean difference value of -2.82. The results of the group statistical analysis show that the students' perceived usefulness of the LearnSoftware site was higher with the value (M = 4.38, SD 0.6) as

compared to the YouTube site (M = 4.09, SD = 0.63). Based on the results of this t-test analysis, the hypothesis Ha[1] is accepted.

B. The analysis of hypothesis Ha[2]

Table 4. Result of group statistics

	Group	N	Mean	Std. deviation
Perceived Ease of use	YouTube	294	4.04	0.63
	LearnSoftware	294	4.29	0.67

Table 4 shows that the test results are significant (t = -4.75, df = 586, p < 0.5). There is a difference between both groups of YouTube and LearnSoftware in the aspect of perceived ease of use with a mean difference value of -2.55. The results of the groups' statistical analysis indicate that the students' perceived ease of use of the LearnSoftware site is higher with the value (M = 4.29, SD 0.67) compared to the YouTube site (M = 4.04, SD = 0.63). Based on the results of this t-test analysis, the hypothesis Ha[2] is accepted.

C. The analysis of hypothesis Ha[3]

Table 5. The Result of group statistic

	Group	N	Mean	Std. deviation
Attitude towards using	YouTube	294	4.18	0.57
	LearnSoftware	294	4.14	0.65

Table 5 shows that the test results are not significant based on the level of value p <0.5). There is no difference between both groups of YouTube and LearnSoftware in the aspect of attitudes towards use. The table shows the statistical results of the groups. Based on the results of this t-test analysis, the hypothesis Ha[2] is rejected.

D. The analysis of hypothesis Ha[4]

Table 6. The Result of group statistic

	Group	N	Mean	Std. deviation
Behavioural Intention	YouTube	294	3.52	0.74
	LearnSoftware	294	4.01	0.81

Table 6 also shows significant test results (t = -7.60, df = 586, p < 0.5). There is a difference between both YouTube and LearnSoftware groups in the aspect of behavioural intention with a mean difference value of -4.89. The statistical analysis results of the groups show that the students' behavioural intention towards LearnSoftware is higher (M = 4.01, SD 0.81) compared to the YouTube site (M = 3.52, SD = 0.74). Based on the results of this t-test analysis, the hypothesis Ha[4] is accepted

IV. DISCUSSION AND CONCLUSION

Based on the analysis results, all of the hypotheses are accepted, except hypothesis Ha3. The findings show that there are differences in the aspects of perceived usefulness, perceived ease of use and behavioural intention of the students between the LearnSoftware and YouTube sites, where the perceived usefulness, perceived ease of use and behavioural intention of the students towards the LearnSoftware site is much higher than that towards the YouTube site. However, the analysis results found that there was no difference in the attitudes of acceptance of the LearnSoftware and YouTube sites.

In reference to the literature review that was previously conducted, perceived usefulness is defined as consumer's belief that adopting such technology or system will improve their work performance [31]. Based on this study, the perceived usefulness aspect is the student's belief that by using the LearnSoftware educational or YouTube video sharing site, their skills and knowledge may be improved, especially in learning software tutorials. As for the two forms of video sharing site, the findings of this study show that the students' perceived usefulness towards the educational video sharing site, namely LearnSoftware, is much higher than that of the YouTube social media site.

Video sharing sites are considered more useful for students to learn software tutorials, as the sites are only focused on tutorials learning according to the predetermined categories. In addition to that, the learning method is also in the form of screencast video that is equipped with a description in Bahasa Melayu, which explains in detail the step-by-step of learning a software. Additionally, the software tutorials collection uploaded are the software selected according to the needs of the students' programme. This focused, educational form of site makes students think that it is useful for their study needs because it can enhance their skills and knowledge in tutorial learning, thereby improving their academic performance.

As for the aspect of perceived ease of use, it is defined as a consumer's belief that the technology or system introduced can be used easily without any problem [31].

This aspect refers to the students' belief that using the LearnSoftware educational or YouTube video sharing site is simple, causing them no difficulty whatsoever. However, the study found that students consider educational video sharing site (LearnSoftware) as easier to use when compared to the social media (YouTube) video sharing site. An educational video sharing site is thought to be easier for students to use for software tutorial learning because the site is more focused, with simple and easy-to-use menu features and interface. Tutorial videos can easily be accessed through the 'Search' button or by selecting a software category. Apart from that, the screencast video content uploaded also uses language and description that are easy to understand. The features available on this LearnSoftware site have led the students into thinking that the site is easy to use, thus causing them to have a positive attitude towards the use of this site for their study needs.

In terms of attitude towards use, it is defined as a positive or negative reaction that an individual demonstrates to conduct a behaviour [32]. According to [31], an attitude towards use is the measure of an individual's evaluation of a system related with the individual. Based on the focus of this study, attitude refers to a positive or negative reaction of the students towards the use of the LearnSoftware educational video sharing site and YouTube video sharing site, after having evaluated the two sites. The results of the analysis found that there was no difference in the attitude of the students towards both forms of video sharing site.

Further analysis found that students did not show any difference in reaction or attitude towards the use of LearnSoftware and YouTube sites despite the fact that these two platforms were different, where one being in the form of education and the other a social media. This is because both sites may be used for software tutorial learning. The differences in features of both sites, such as language use, video content features, menus, interfaces, et cetera, did not influence the students when choosing one of them. In fact, the students were positive about both sites. This finding prove that there is no difference in attitude reactions towards the use of LearnSoftware or YouTube video sharing sites.

Finally the aspect of behavioural intention was analysed to see if there was any difference in the behavioural intention towards LearnSoftware and YouTube. Based on the literature review done, the definition of behavioural intention is a measure of an individual's decision to execute a future behaviour or otherwise [33]. Unlike the previous aspect of attitude, attitude is merely a positive or negative reaction of the students towards both sites, but the behavioural intention is a decision made by the students to accept or reject its use.

In this study, behavioural intention refers to students' intention to use the LearnSoftware and YouTube educational video sharing site. The results of the analysis found that the students' intention to use the LearnSoftware educational video sharing site was higher than that of the YouTube, a social media-based video sharing site. Hence, the students decided to use the LearnSoftware site for learning tutorials. The students intended to use the LearnSoftware site for the purpose of learning software tutorials throughout their study sessions, as this site has focused learning features and does not contain distractions, such as entertainment elements.

In conclusion, to support the findings of this study based on previous studies, it was found that the studies on the comparison of acceptance between educational and social media video sharing sites were very limited. However, studies on the students' acceptance towards educational-based websites, such as e-learning sites, learning management system, and educational portals among others, using the TAM constructs have been carried out extensively. Therefore, there is a considerable number of previous studies that reported the students' acceptance of educational-based sites was due to the factors of perceived usefulness, perceived ease of use, attitude, and behavioural intention

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