FACTORS AFFECTING THE USE OF YOUTUBE AS A MEDIA SUPPORTING STUDENT LEARNING PERFORMANCE

YULIUS YUS[1], RIYANTO JAYADI[2]

[1,2]Information Systems Management Department, BINUS Graduate Program – Master of Information Systems Management, Bina Nusantara University, Jakarta, Indonesia 11480

E-mail: [1]yulius.yus@binus.ac.id, [2]riyanto.jayadi@binus.edu

ABSTRACT

The purpose of this study was to determine whether using YouTube as a medium to support student learning can improve learning performance by identifying the factors that encourage students to use YouTube as a medium to support learning. Therefore, this research was conducted by combining the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT). This research was conducted using a survey method. This research was conducted on 906 respondents, with results showing that YouTube's perceived ease of use has a significant positive effect on perceived usefulness, YouTube's perceived ease of use has a significant positive effect on intent to learn, YouTube perceived ease of use has no effect on actual learning, perceived usefulness a significant positive effect on the intention to learn, perceived usefulness has a significant positive effect on actual learning, facilitating conditions have a significant positive effect on the intention to learn, intention to learn has a significant positive effect on actual learning, self-control has a significant positive effect on actual learning, and actual learning has a significant positive effect on significant positive on learning performance. The results of this study add to current knowledge about the importance of using YouTube as a medium to support student learning. Teachers can also use this to develop appropriate strategies to improve the quality of student learning with the support of learning media such as Youtube.

Keywords: *Learning Performance, YouTube, TAM, UTAUT*

1. INTRODUCTION

The use of the internet can not be separated from the life that has developed how humans obtain information, communicate, work, learn, and play [1]. Based on data from We Are Social media in collaboration with Hootsuite? Indonesia is in the ninth position out of 47 countries analyzed for spending time on social media, meaning that many Indonesians cannot live without social media [2]

The total population of Indonesia increased by 2.9 million (1.1%) from January 2020 to January 2021. (50.3%) of the population were male, while (49.7%) of the Indonesian population were female. (57.0%) The Indonesian population lives in urban areas while the rest (43.0%) live in rural areas. Statistics on the use of social media in Indonesia show that there were 170 million users in January 2021. The number of media users in Indonesia increased by 10 million people (6.3%) from 2020 to 2021.

Social media users in Indonesia are equivalent to (61.8%) of the total population in January 2021. The average Indonesian spends three hours and 14 minutes a day accessing social media. Most of the social media users in Indonesia are in the age range of 18 to 24 years, the number of male users reaches (15.9%) which is superior to female users percentage (14.8%). Meanwhile, in the age range of 25 to 34 years, the percentage of male users reached (19.3%), which has a higher percentage than female users, with a percentage of 14.8%. The age range of 18 to 24 years is the millennial generation who cannot linger without using social media because the millennial generation is the largest population with a productive age, where one of the main characteristics of the millennial generation is characterized by increased use and familiarity with communication, media, and digital technology [3].

Based on the most used applications, sequentially the first position is YouTube, WhatsApp, Instagram, Facebook, and then Twitter. Based on this data, YouTube is in the top position as a social media application that is often used. One's dependence on technology, especially social media, has also changed how social media is used. In some parts of Indonesia, residents on the island of Kalimantan are also the biggest contributors to many social media users [3].

Based on a report by the Indonesian Internet Service Providers Association (APJII), the most internet users in Kalimantan in 2019–2020 were West Kalimantan with 3,920,509 million users, followed by Central Kalimantan with 2,005,898 million users, South Kalimantan with 3,259,199 million users, East Kalimantan with 2,855,943 million users, and North Kalimantan with 591,260 million users.

Vocational high school is one of the educational institutions in Indonesia which is equivalent to high school. In vocational high school, students will learn various materials related to skills and expertise, in contrast to senior high school which focuses more on general knowledge. Vocational high school graduates are more intended for students who want to work immediately or create jobs after graduating from school and do not continue to college.

Regarding skills and expertise, lessons in Vocational High Schools are more technical in nature, it will be difficult if the subject matter is delivered only with reading material. Therefore, social media such as YouTube can be a supporting medium for delivering more interactive material such as video tutorials. So in this study, the author proposes to analyze YouTube social media users. The author chose the social media YouTube because this application was ranked first as the most widely used social media application in Indonesia.

Most of the previous research has concentrated on the acceptability aspect of e-learning platforms for learning media, both in terms of formal and informal learning, with some studies focusing on how the world of education adopts e-learning platforms as learning resources. Especially in the current era of technological development, while one of the social media that is very popular in all circles, namely YouTube, there is still a lack of research that focuses on the factors that influence the acceptance of YouTube as a media to support learning.

In addition, the influence of YouTube acceptance becomes important because of the revolutionary changes in the current education system. Being the main motivation of researchers to focus on exploring the influence of using social media YouTube will improve student learning performance.

2. THEORETICAL BACKGROUND

2.1 Learning Media

Learning media is one component of learning activities that plays an important role in teaching and learning activities. The accuracy of the use of teaching materials can affect the quality of the process and the results obtained. Learning media is anything that can be used to convey messages from teachers to students that stimulate students' thoughts, feelings, interests, and interests so that the learning process occurs [4].

Learning as a process is a system that includes various components, including educators (teachers), students (students), materials, methods, learning resources, as well as learning and assessment media. The role of an educator in the learning process is to seek the creation of a management network between these components so that learning runs smoothly and succeeds well. The success of learning is very much determined when learning can change students, in the sense of growing and developing the potential of students so that they can directly benefit from their personal development.

Learning resources can be interpreted from a narrow or broad perspective. Narrowly it can be in the form of books or reading materials such as articles and so on, while broadly means all sources that can be used for the benefit of the learning process, either directly or indirectly [5].

Learning resources aim to make a person or individual change from ignorance to knowledge, from not understanding to understanding, from being unskilled to being skilled, and enabling a person or individual to be able to distinguish between good and bad things, as well as being able to distinguish commendable and undeserved actions. . Material that can be a source of learning is anything that can bring benefits or support or support individuals to change in a more dynamic direction. Learning resources can be interpreted as everything that can be used and utilized in the learning process to facilitate the achievement of learning objectives [4].

At first, the media only functioned as a visual aid in learning activities, namely in the form of facilities that could offer students a visual experience to increase learning motivation, clarifying and simplifying complex concepts and abstracts for simplification, being more concrete and easy to understand. Therefore, the media can serve to increase the assimilation or retention of learning materials by students.

Learning media, especially visual media, have four functions, namely attention, affective, cognitive, and compensatory [6]. The function of visual media attention is the core, which is to attract and direct students to concentrate on the content of lessons related to the visual intent displayed or accompanying the text of the subject matter. The effective function of visual media can be seen in the level of enjoyment of students when studying or reading illustrated texts. The xylophone or visual symbol can arouse the emotions and attitudes of students, the cognitive function of visual media can be seen from research findings which reveal that visual symbols or images facilitate the achievement of goals to understand and remember information or messages contained in images, and the compensatory function of learning media can be seen from the results of the study that visual media that help context for understanding texts students who are weak in reading to organize information in the text and recall it.

From the various functions of learning media above, the ultimate goal is to improve the quality of learning. The quality of this learning is built through effective communication. Although effective communication only occurs when tools are used as intermediaries for interaction between teachers and students. Therefore, the function of the media is to improve the quality of learning with indicators that all materials are completely delivered and students understand more easily.

2.2 Technology Acceptance Model

TAM is a broad acceptance theory that aims to understand how users accept and use new technologies [7] [8] [9]. TAM was only designed specifically to describe computerized use and behavior but has since been adopted to describe the technology used in a variety of contexts [7] [10]

TAM initially included two variables, usability, and ease of use, to determine a person's attitude and intention to use a system [7]. Perceived usefulness is a measure of the extent to which a person believes that using a particular technology or system can improve their job performance [11]. The characteristics perceived by users are expected to influence their intention to use the technology or system so that it can encourage them to use the technology or system [12].

2.3 Unified Theory of Acceptance and Use of Technology

Today's technological developments must be able to bring higher productivity or generate profits in various fields of life, both business and education

[13]. Everything will be achieved if someone can accept and want to use the technology [14].

Researchers have developed many models to measure the level of technology acceptance [15] [16]. One model that has been widely used is the Unified Theory of Acceptance and Use of Technology. This model was developed by Venkatesh et al. in 2003 by combining and comparing eight existing empirical models of individual acceptance of new technologies [17].

2.4 Hypothesis Development

Perceived ease of use is the degree to which a person believes that using the system need not be difficult [7]. Perceived ease of use is also expressed as the degree to which users expect the system they are using to not require a lot of effort [18]. Perceived ease of use is a variable that will be implemented based on the acceptance model of a technology or system [7].

The variables described in this study are the level of convenience of students using YouTube to feel its usefulness, increase their intention to learn, and can use it wisely for actual learning. This hypothesis is supported by studies [19] [20]. The following are the hypotheses proposed in this study.

H1. Perceived Ease of Use affects Perceived Usefulness

H2. Perceived Ease of Use affects the Intention of Learning

H3. Perceived Ease of Use affects Actual Learning

Perceived usefulness is a measure of the extent to which a person believes and believes that using a particular technology or system can maximize performance in any case, be it work or study [7]. The ease that is felt by someone when using a particular technology or system refers to the extent to which they think that using the technology or system can increase productivity, effectiveness, and efficiency in their work. This variable describes the extent to which students believe that using YouTube can increase their intention to learn and can study seriously. This hypothesis is supported by research [21], [22]. The following are the hypotheses proposed in this study.

H4. Perceived Usefulness can affect Learning Intention

H5. Perceived Usefulness affects Actual Learning

Facilitating conditions are conditions where a person knows whether the infrastructure and facilities available to use a particular technology or system are available or not [23]. This study

conceptualizes facilitation as students' perceptions of whether they have access to the necessary resources and support to use YouTube for educational purposes [24]. The variables described in this study are the extent to which students have facilities such as devices and internet networks to access YouTube which can affect students' learning intentions. The following are the hypotheses proposed in this study.

H6. Facilitating Conditions affect the Intention of Learning

Behavioral Intention is the extent to which a person has plans to use or not use a system in the future [23]. Intention to Learning referred to in this study is the student's intention to learn when using YouTube for the actual learning process. This hypothesis is also supported by research [21], [24]. The following are the hypotheses proposed in this study.

H7. Intention to Learning affects Actual Learning

Self-control is defined as the self-initiated regulation of thoughts, feelings, and actions when previously cherished goals conflict with temporarily more satisfying goals [25]. For example, in this study, a student faced a conflict of self-control when choosing to watch study videos for exams or watch entertainment programs. Watching entertainment videos is certainly a lot of fun nowadays but in the end, it doesn't save the time of testing. On the other hand, watching video lessons isn't much fun at the moment, but it can eventually help during exams. Self-control is distinguished from related concepts by two main factors. First, self-control must start with oneself. Second, self-control is relevant only for choices where one choice is ultimately recognized as more important than another, while a less important choice is more attractive. This variable explains the level of student self-control regarding the use of YouTube on learning concentration and whether YouTube is used for real learning. This hypothesis is supported by studies [24]. The following are the hypotheses proposed in this study.

H8. Self-Control affects Actual Learning

The actual use of technology and systems is the degree to which a person feels satisfied when using the technology or system, thereby increasing their productivity so that they will continue to use it continuously [18]. The actual learning in this study is defined as YouTube being used for learning purposes. A previous study by Wongwatkit et al. 2020 [26] shows that three things affect learning performance, namely, students' perceived usefulness of conceptual learning suggestions will have a positive effect on their learning performance, providing students with material that is with learning preferences has a positive effect on their learning performance and students' perceptions of the usefulness of learning outcomes. Mastery of learning affects their learning performance. This variable explains the actual level of use of YouTube for learning purposes and whether it can affect student learning performance. The following are the hypotheses proposed in this study.

H9. Actual Learning affects Learning Performance

3. METHODOLOGY

3.1 Research Model

Based on the previously described hypothesis, Figure 1 illustrates the model built in this study. The model in this study is the development of the Technology Acceptance Model and the Unified Theory of Acceptance and Use of Technology. The Perceived Ease of Use variable is estimated to affect the Perceived Usefulness variable, the Perceived Ease of Use variable is estimated to affect the Intention to Learning variable, the Perceived Ease of Use variable is estimated to affect the Actual Learning variable, the Perceived Usefulness variable is estimated to affect the Learning Intention variable, the Perceived Usefulness variable is estimated to affect the Learning variable. Actual, the Facilitating Conditions variable is expected to affect the Learning Intention variable, the Learning Intention variable is expected to influence the Actual Learning variable, the Self-Control variable is expected to influence the Actual Learning variable, and the last variable is Actual Learning which is expected to influence the Learning Achievement variable in the context of using YouTube as a media to support student learning.
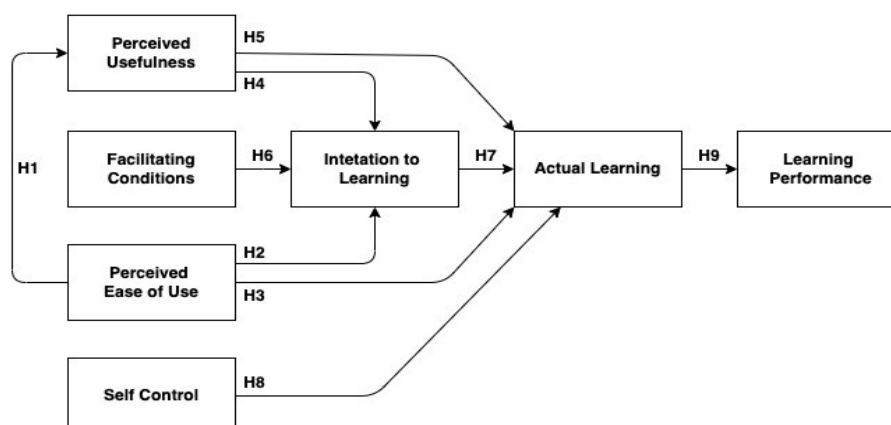
Figure 1: Research Model Development

3.2 Data Collection

The data collection used in this research is a survey method, which is distributing questionnaires in the form of a collection of questions about the measured variables and submitted in writing to the respondents. Questionnaires are distributed to respondents, then they will answer the questions in the questionnaire by choosing the answer options provided. In addition to collecting data through questionnaires, library research is carried out from library sources such as journals, books, literature, articles, and other sources to find information that can support this research.

The population in this study were students of the Keling Kumang Vocational High School, one of the schools in Indonesia, especially in West Kalimantan that utilizes YouTube as a source of supporting learning. The number of respondents in this study was 906 people using the total population, data were collected from respondents using an online questionnaire (Google Forms).

3.3 Validity and Reliability

To test the feasibility of each indicator at the time of defining the variables, validity and reliability tests were carried out. An indicator is said to be valid if the Outer Loadings get a value greater than 0.50 for convergent validity [27]. and the Average Variance Extracted (AVE) value must also be above 0.50 for discriminatory validity of the construct can represent 50% of the indicator variance [28]. As for reliability, the indicator can be said to be reliable if it obtains a Cronbach's Alpha value of at least 0.60 and a minimum Composite Reliability value of 0.70 [29].

Previously, a research model has been made, at this stage, the model that has been made will be tested to estimate the significance of the coefficient path. The compiler uses a tool to simplify the data analysis process, namely by using SmartPLS version 3.3 and then for bootstrap analysis using 5000 subsamples.

This study shows that the results of the calculation of convergent validity can be seen from the Outer Loadings value, all get a value above 0.50 and discriminatory validity can be seen from the Average Variance Extracted (AVE) value, all of which also get a value above 0.50. For the reliability of Cronbach's Alpha values, all above 0.60, and the Composite Reliability values also all above 0.70, it can be concluded that all indicators made for this study are valid and reliable. That all variables in this study have an Average Variance Extracted (AVE) value greater than the correlation construct can be seen in Table 2.

Table 1: Validity and Reliability

Research Variable	Indicator	Outter Loadings	Cronbach's Alpha	Composite Reliability	Average Variance Extracted
	PEU1	0,792			
PEU	PEU2	0,775	0,796	0,867	0,620
	PEU3	0,783			

	PEU4	0,799			
	PU1	0,770			
	PU2	0,731			
	PU3	0,781			
PU	PU4	0,767	0,885	0,910	0,592
	PU5	0,763			
	PU6	0,796			
	PU7	0,776			
	FC1	0,729			
FC	FC2	0,796	0,783	0,860	0,606
	FC3	0,814			
	FC4	0,773			
	ITL1	0,775			
ITL	ITL2	0,812	0,804	0,871	0,629
	ITL3	0,794			
	ITL4	0,791			
	LP1	0,822			
LP	LP2	0,858	0,864	0,908	0,711
	LP3	0,832			
	LP4	0,860			
	AL1	0,840			
AL	AL2	0,856	0,822	0,894	0,737
	AL3	0,879			
	SC1	0,756			
SC	SC2	0,812	0,625	0,799	0,571
	SC3	0,695			

Table 2: Fornell-Larcker

Research Variable	AL	FC	ITL	LP	PEU	PU	SC
AL	0,859						
FC	0,544	0,778					
ITL	0,619	0,640	0,793				
LP	0,763	0,583	0,635	0,843			
PEU	0,484	0,611	0,561	0,544	0,787		
PU	0,697	0,649	0,593	0,755	0,635	0,769	
SC	0,519	0,529	0,612	0,471	0,447	0,447	0,756

4. RESULT AND ANALYSIS

When all data has been declared valid and reliable based on the results of the validity and reliability test, then the data is considered feasible to be processed in the next step, namely hypothesis testing. The researcher defines the acceptance of the hypothesis by analyzing the value of the hypothesis. At the time of testing the hypothesis, the first indicator is Path coefficients. Path coefficients are a value that is useful in showing the direction of the relationship on a variable, whether a hypothesis has a positive or negative direction. Path coefficients have values that are in the range of -1 to 1. If the value is in the range 0 to 1 then it can be declared positive, whereas if the value is in the range -1 to 0 then it can be declared negative [30] [31] [32].

After knowing the value of the path coefficients, the next step is to look at the t-statistical indicator. This indicator can show whether the value of path coefficients in the model is significant or not using a two-way t-statistic test, the t-statistical test can be said to be significant if the value shows 1.96 for a significance of 5% [33] [34]. If the t-statistic value is greater than 1.96 and the path coefficients are in the range of 0 to 1, it can be said that the exogenous to endogenous variables have a significant positive effect, whereas if the t-statistic value is greater than 1.96 and the path coefficients value is in the range of -1 to 0 it can be said that the exogenous to endogenous variables have a significant negative effect. However, if the t-statistic value is below 1.96, it can be concluded that the exogenous variable to the endogenous variable has no effect.

The next indicator is f-square, if the f-square value is greater than 0.35 then the effect of exogenous variables on endogenous variables is in a large category, if the f-square value is greater than 0.15 then the effect of exogenous variables on endogenous variables is in the medium category. , and if the f-square value is greater than 0.02 then the effect of exogenous variables on endogenous variables is in a small category. Meanwhile, if the f-square value is less than 0.02, it can be said that the exogenous variable does not affect the endogenous variable. Table 3 below are the results of this study.
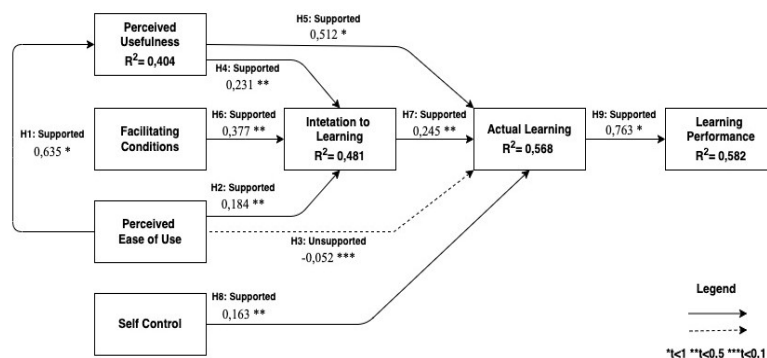

Figure 2: Results of Research Model Developme

Table 3: Hypothesis Testing

Hypothesis	Path	Path Coefficient	t-Statistics	f-Square	Description
H1	PEU -> PU	0,635	22,430	0,677	**Accepted**
H2	PEU -> ITL	0,184	4,540	0,035	**Accepted**
H3	PEU -> AL	-0,052	1,624	0,003	**Rejected**
H4	PU -> ITL	0,231	5,606	0,050	**Accepted**
H5	PU -> AL	0,512	13,868	0,311	**Accepted**
H6	FC -> ITL	0,377	8,182	0,141	**Accepted**
H7	ITL -> AL	0,245	6,182	0,066	**Accepted**
H8	AL -> LP	0,763	37,520	1,392	**Accepted**
H9	SC -> AL	0,163	5,050	0,037	**Accepted**

5.   DISCUSSION AND IMPLICATIONS

5.1   Theoretical Implications

This study refers to the combination of TAM and UTAUT conceptual theories to see the factors that influence the use of YouTube as a learning aid by students. In terms of academic contributions, this research is one of the studies that empirically analyzes the factors that determine the acceptance of YouTube as a means of supporting learning by students in Indonesia, especially in West Kalimantan. After analyzing and processing research data, it shows that most of them are relevant to previous research. However, one hypothesis that was not proven was that perceived ease of use was found to not affect actual learning. This finding is not the same as previous research [20].

This shows that the perception of the ease of using YouTube as a medium to support learning does not make students use it only for learning. This is also evidenced by the absence of influence between the two variables and makes the perception of the ease of using YouTube not affect the actual learning process. The conclusion is that the perceived ease of use of YouTube does not determine whether students will use it for learning or not.

In addition, perceived ease of use affects perceived usefulness. This proves that the results of previous studies by [19] and [20] state the effect of perceived ease of use on perceived usefulness. Therefore, it appears that the ease of use of YouTube has an impact on its usefulness as a media to support student learning. It can be concluded that the ease of using YouTube for students increases its usefulness as a medium to support learning.

Furthermore, perceived ease of use also affects learning intentions. This also proves the results of previous research by [19] and [20]. Therefore, demonstrating the ease of using YouTube can encourage someone to continue using it. It can be concluded that students find it easy to use YouTube so it encourages them to continue to use it as a medium to support learning.

It can also be seen that Perceived Usefulness affects learning intentions. This proves the results of previous research by [21], [22]. Therefore, it appears that YouTube as a learning support media provides benefits and tends to provide behavior to continue using it. It can be concluded that students feel the benefits when using YouTube as a learning support media to encourage students to continue using YouTube to support their learning process.

Perceived Usefulness also has a positive effect on actual learning. This proves the results of previous research by [21], [22]. The benefits of using YouTube as a medium to support learning show the actual learning process. By using YouTube as a learning support media, students feel the benefits of using it and achieving the learning process they expect.

Facilitating conditions have a positive effect on learning intentions. This proves the results of previous research by [21], [24]. Therefore, the facilitating conditions influence the intention to continue using YouTube as a medium to support learning. It can be concluded that students' intention to continue using YouTube is determined by the facilities they have to use to use YouTube, such as devices and internet networks.

Learning intention also has a positive effect on actual learning. This proves the results of previous research by [21], [24]. Therefore, the learning process is influenced by the desire to continue to use YouTube as a medium to support learning. It can be concluded that the actual learning by students is determined by their intention to continue using YouTube as a medium to help understand the learning material.

Self-control has a positive effect on actual learning. This proves the results of previous research by [21], [24]. Therefore, self-control when using YouTube is very influential in achieving a natural learning process. It can be concluded that students' self-control when accessing YouTube for learning intentions is very important because it dramatically affects whether YouTube is used for learning or even for watching entertainment.

Lastly, actual learning has a positive effect on learning achievement. This proves the results of previous research by [26]. Therefore, starting from the perceived benefits when using YouTube as a learning support medium, the intention to continue using it as a learning support medium, to self-control when using it has a positive impact on the actual learning process, so a good learning process, the initial goal regarding the use YouTube as a learning support media has a positive impact on learning performance. It can be concluded that the use of YouTube can improve student achievement.

5.2   Practical Implications

This study aims that with the existence of technology such as social media, one of which is Youtube, which is used in this study, it can be used in the educational environment by both teaching staff and students. The hope in this research can help the educational environment not to waste technological progress as a force to continue learning without being fixated on teaching sources

from teachers only so that it can improve the quality of learning with supporting media such as youtube.

This study shows that YouTube can improve student learning achievement by paying attention to several things such as the ease of use of YouTube can provide benefits for students, the ease of use of YouTube can make students continue to use it for learning purposes, and the benefits obtained. when using YouTube for learning purposes it can make students continue to use it and feel YouTube as a real learning support media, facilities such as devices and internet networks greatly affect students to use YouTube or not to study, and students' intention to use YouTube for the sake of learning will affect the learning process that is carried out. Student self-control is significant because students must be able to avoid distractions so they don't switch from using YouTube as a learning medium instead turning it into an entertainment medium because of the diversity of content. on Youtube. If students use YouTube as a medium to support learning, the final goal is to improve learning achievement.

Finally, if the previous research only used one of the models in the research, namely, TAM or UTAUT to measure the acceptance of Youtube technology as a learning medium, then this study combines the two models and adds one variable, namely student self-control when they use Youtube. In this study it was also found that perceived ease of use did not affect actual learning, this finding is certainly not the same as previous research by [20]. This shows that the ease of using Youtube does not prove that Youtube will be used for actual learning. The results of interviews were limited to some students, they said that the diversity of content on Youtube often made them lose focus when learning because in addition to learning content there was also a lot of entertainment content that made them switch from the initial purpose of accessing Youtube for learning purposes to seeking entertainment, this is certainly related with self-control.

5.3 Research Limitations

In this study, what was tested was the effect of perceived ease of use on perceived benefits, perceived ease of use on learning intentions, perceived usefulness on learning intentions, perceived usefulness on actual learning, facilitating conditions on learning intentions, and learning intentions on actual learning, and actual learning. on learning. Learning Achievement as a medium. learning support.

The following are some of the limitations given below: first, the limitations of users and answers due to using quantitative methods. This research was only conducted at the Keling Kumang vocational high school, a school in the province of West Kalimantan, Indonesia. Therefore, this research can be carried out further in the future by (1) strengthening the research with direct surveys at Keling Kumang Vocational High School or other schools such as interviews, observations, or other tools to strengthen the results of further research, (2) combining quantitative research and qualitative to get more accurate research results, (3) strengthen the model by including possible moderating variables such as age and gender in the use of YouTube as a supporting media, (4) further research can be carried out in several other schools or a combination of many schools from various education level.

6. CONCLUSION

This study determines what factors influence the use of YouTube as a medium to support learning. This research was conducted by combining and developing the Technology Acceptance Model (TAM), and the Unified Theory of Acceptance and Use of Technology (UTAUT). To make it easier when analyzing data, researchers used a tool, namely SmartPLS, and the model was tested using PLS-SEM. This research was conducted by survey method and produced 906 respondents.

The results showed that YouTube's perceived ease of use had a significant positive effect on perceived usefulness, YouTube's perceived ease of use had a significant positive effect on intent to learn, YouTube's perceived ease of use did not affect actual learning, perceived usefulness had a significant positive effect on the intention to learn, perceived usefulness has a significant positive effect on actual learning, facilitating conditions has a significant positive effect on the intention to learning, learning intention has a significant positive effect on actual learning, self-control has a significant positive effect on actual learning, and actual learning has a significant positive effect on learning performance. It can be concluded that using YouTube as a learning support media can improve student learning performance.

REFERENCES:

[1] R. A. Prasojo, D. A. Maharani, and M. O. Hasanuddin, "Mengujikan Internet Addiction Test (IAT) ke Responden Indonesia," no. August 2019, 2018, doi: 10.31227/osf.io/7ag4w.

[2] S. Kemp, "Digital 2021: Indonesia," *datareportal.com*, 2021. https://datareportal.com/reports/digital-

2021-indonesia?rq=indonesia (accessed Jul. 01, 2021).

[3]   L. Aisafitri and K. Yusriyah, "Kecanduan Media Sosial (Fomo) Pada Generasi Milenial," *Jurnal Audience*, vol. 4, no. 01, pp. 86–106, 2021, doi: 10.33633/ja.v4i01.4249.

[4]   N. Nurdyansyah, *Media Pembelajaran Inovatif.* 2019. doi: 10.21070/2019/978-602-5914-71-3.

[5]   R. A. hmad Sudjana Nana, *Media Pengajaran*. Bandung: Sinar Baru, 1989.

[6]   W. H. Levie and R. Lentz, "Effects of text illustrations: A review of research," *ECTJ*, vol. 30, no. 4, pp. 195–232, Dec. 1982, DOI: 10.1007/BF02765184.

[7]   Davis and D. Fred, "User Acceptance of Computer Technology: A Comparison of Two Theoretical Models," *Management Science*, vol. 35, pp. 982–1002, 1989.

[8]   V. Venkatesh and F. D. Davis, "A Theoretical Extension of the Technology Acceptance Model: Four Longitudinal Field Studies," *Management Science*, vol. 46, no. 2, pp. 186–204, Feb. 2000, DOI: 10.1287/mnsc.46.2.186.11926.

[9]   V. Venkatesh and M. G. Morris, "Why Don't Men Ever Stop to Ask for Directions? Gender, Social Influence, and Their Role in Technology Acceptance and Usage Behavior," *MIS Quarterly*, vol. 24, no. 1, p. 115, Mar. 2000, DOI: 10.2307/3250981.

[10]   V. Venkatesh and H. Bala, "Technology Acceptance Model 3 and a Research Agenda on Interventions," *Decision Sciences*, vol. 39, no. 2, pp. 273–315, May 2008, DOI: 10.1111/j.1540-5915.2008.00192.x.

[11]   F. D. Davis, "User acceptance of information technology: system characteristics, user perceptions, and behavioral impacts," *International Journal of Man-Machine Studies*, vol. 38, no. 3, pp. 475–487, Mar. 1993, DOI DOI: 10.1006/imms.1993.1022.

[12]   R. Scherer, F. Siddiq, and J. Tondeur, "The technology acceptance model (TAM): A meta-analytic structural equation modeling approach to explaining teachers' adoption of digital technology in education," *Computers & Education*, vol. 128, pp. 13–35, Jan. 2019, DOI: 10.1016/j.compedu.2018.09.009.

[13]   C.-M. Chiu and E. T. G. Wang, "Understanding Web-based learning continuance intention: The role of subjective task value," *Information & Management*,

[14]   vol. 45, no. 3, pp. 194–201, Apr. 2008, DOI: 10.1016/j.im.2008.02.003.

[14]   M. El-Masri and A. Tarhini, "Factors affecting the adoption of e-learning systems in Qatar and USA: Extending the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2)," *Educational Technology Research and Development*, vol. 65, no. 3, pp. 743–763, Jun. 2017, DOI: 10.1007/s11423-016-9508-8.

[15]   Y. K. Dwivedi, N. P. Rana, A. Jeyaraj, M. Clement, and M. D. Williams, "Re-examining the Unified Theory of Acceptance and Use of Technology (UTAUT): Towards a Revised Theoretical Model," *Information Systems Frontiers*, vol. 21, no. 3, pp. 719–734, Jun. 2019, DOI: 10.1007/s10796-017-9774-y.

[16]   V. Venkatesh, J. Thong, and X. Xu, "Unified Theory of Acceptance and Use of Technology: A Synthesis and the Road Ahead," *J Assoc Inf Syst*, vol. 17, no. 5, pp. 328–376, May 2016, DOI: 10.17705/1jais.00428.

[17]   E. M. van Raaij and J. J. L. Schepers, "The acceptance and use of a virtual learning environment in China," *Computers & Education*, vol. 50, no. 3, pp. 838–852, Apr. 2008, DOI: 10.1016/j.compedu.2006.09.001.

[18]   V. Venkatesh and F. D. Davis, "Theoretical Extension of the Technology Acceptance Model: Four longitudinal field studies," *Management Science*, vol. 46, no. 2, pp. 186–204, 2000, DOI: 10.1287/mnsc.46.2.186.11926.

[19]   N. Chintalapati and V. S. K. Daruri, "Examining the use of YouTube as a Learning Resource in higher education: Scale development and validation of TAM model," *Telematics and Informatics*, vol. 34, no. 6, pp. 853–860, 2017, DOI: 10.1016/j.tele.2016.08.008.

[20]   Z. Turan and H. B. Cetintas, "Investigating university students' adoption of video lessons," *Open Learning*, vol. 35, no. 2, pp. 122–139, 2020, DOI: 10.1080/02680513.2019.1691518.

[21]   M. Habes, S. A. Salloum, M. Alghizzawi, and C. Mhamdi, "The Relation Between Social Media and Students' Academic Performance in Jordan: YouTube Perspective," *Advances in Intelligent Systems and Computing*, vol. 1058. pp. 382–

392, 2020. AldenDOIen: 10.1007/978-3-030-31129-2_35.

[22] MDOInyAlden, Y. P. Weniko, S. Sfenrianto, and G. Wang, "Behaviour Intention of Information Technology Students Using YouTube as Learning Resources," in *2019 4th International Conference on Information Technology, Information Systems and Electrical Engineering (ICITISEE)*, 2019, pp. 457–462. DOI: 10.1109/ICITISEE48480.2019.9003833.

[23] V. Venkatesh, S. M. Walton, and J. Y. L. Thong, "Quarterly Consumer Acceptance and Use of Information Technology: Extending the Unified Theory of Acceptance and Use of Technology1." [Online]. Available: http://about.jstor.org/terms

[24] S. Bardakci, "Exploring high school students' educational use of youtube," *International Review of Research in Open and Distance Learning*, vol. 20, no. 2, pp. 260–278, 2019, DOI: 10.19173/irrodl.v20i2.4074.

[25] A. L. Duckworth, J. L. Taxer, L. Eskreis-Winkler, B. M. Galla, and J. J. Gross, "Self-Control and Academic Achievement," *Annu. Rev. Psychol*, vol. 70, pp. 373–399, 2019, DOI: 10.1146/annual-psych-010418.

[26] C. Wongwatkit, P. Panjaburee, N. Srisawasdi, and P. Seprum, "Moderating effects of gender differences on the relationships between perceived learning support, intention to use, and learning performance in a personalized e-learning," *Journal of Computers in Education*, vol. 7, no. 2, pp. 229–255, Jun. 2020, DOI: 10.1007/s40692-020-00154-9.

[27] Z. Zhang, M. J. Zyphur, and K. J. Preacher, "Testing multilevel mediation using hierarchical linear models: Problems and solutions," *Organizational Research Methods*, vol. 12, no. 4, pp. 695–719, Oct. 2009, DOIDOIDOI: 10.1177/1094428108327450.

[28] "J. F. Hair, G. T. M. Hult, C. Ringle, and M. Sarstedt, A Primer on Partial Least Squares Structural Equation Modeling, vol. 46, no. 1–2. 2014."

[29] "Abdillah, W., & Hartono, J. (2015). Partial Least Square (PLS): alternatif structural equation modeling (SEM) dalam penelitian bisnis. Yogyakarta: Penerbit Andi, 22, 103-150.".

[30] I. Ghozali, *Aplikasi Analisis Multivariate Dengan Program IBM SPSS 25*. Undip Semarang, 2018.

[31] F. Lehner and N. Haas, "Knowledge Management Success Factors-Proposal of an Empirical Research," *Electronic Journal of Knowledge Management*, vol. 8, pp. 79–90, 2010.

[32] J. F. Hair Jr, M. Sarstedt, L. Hopkins, and V. G. Kuppelwieser, "Partial least squares structural equation modeling (PLS-SEM)," *European Business Review*, vol. 26, no. 2, pp. 106–121, Mar. 2014, DOI: 10.1108/EBR-10-2013-0128.

[33] K. Wong, "Partial least square structural equation modeling (PLS-SEM) techniques using SmartPLS," *Marketing Bulletin*, vol. 24, pp. 1–32, Jan. 2013.

[34] J. F. Hair, C. M. Ringle, and M. Sarstedt, "PLS-SEM: Indeed a Silver Bullet," *Journal of Marketing Theory and Practice*, vol. 19, no. 2, pp. 139–152, Apr. 2011, DOI: 10.2753/MTP1069-6679190202.