

The Effect of Using Online Learning Media on Student Satisfaction at the School of Multi Media "MMTC" Yogyakarta

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ABSTRACT

The use of learning media is currently the most important aspect that deserves attention during the learning process, especially since the beginning of the outbreak of the new virus, namely COVID-19 which originated from China. Since the end of 2019, the World Health Organization (WHO) has designated this as a pandemic that has hit the world or a global pandemic. The pandemic caused the way of learning to change from what was originally conventional to online learning, this caused various reactions from students. Therefore, the purpose of this study was to determine how much influence the use of online learning media had on student satisfaction at STMM Yogyakarta. This study uses the EUCS method to measure the dimensions of satisfaction by Doll & Torkzadeh and the concept of seven dimensions of ACTIONS media utilization by A. W. (Tony) Bates. The method used in this research is quantitative research. The samples taken were active students of STMM Yogyakarta as many as 95 people. The data collection technique used a questionnaire distributed via google form. The data analysis method in this study uses Simple Linear Regression, Coefficient of Determination (R Square) and t-test. Data processing using SPSS 24.00 software for Windows. The results of this study indicate that the use of online learning has an effect on student satisfaction of 89% while the rest is influenced by other variables.

Keywords: Student Satisfaction, Online Learning Media, EUCS, ACTIONS

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INTRODUCTION

The impact of the Covid-19 pandemic is very broad. Aside from bringing problems to the health sector, this pandemic also brings problems to the education and economic sector. It was inconceivable that the education system in Indonesia had to be adjusted because of this epidemic. The world of education should make innovations in its learning system for the safety of human life. Online learning becomes an option to prevent the spread of this virus. This remote online learning is certainly a challenge for educators and students. The use of learning media has finally become a necessity for the smooth delivery of learning materials to the students. The use of learning media is currently the most important aspect that should be considered during the learning process, especially since the beginning of the outbreak of this virus that originated in China. Since the end of 2019, The World Health Organization (WHO) has declared this outbreak a pandemic that hit the world or a global pandemic (Cucinotta & Vanelli, 2020). It means that the whole world is also experiencing the same problem, especially on the world of education. Online learning in Indonesia is implemented after the publication of Circular Letter of the Ministry of Education and Culture No. 15 of 2020 concerning of learning from home in the Emergency Period for the Spread of Coronavirus Disease (Covid-19). At the end of March 2020, the Directorate General of Higher Education Ministry of Education and Culture (Kemdikbud) conducted a survey on the implementation of online lectures during the COVID-19 pandemic. This survey involved students as respondents, totaling 237,193 students. The result shows that as many as 89.17% of students said that face-to-face lectures are better than online lectures (Online Study Survey: Students Are Ready, Internet is Slow, 2020).

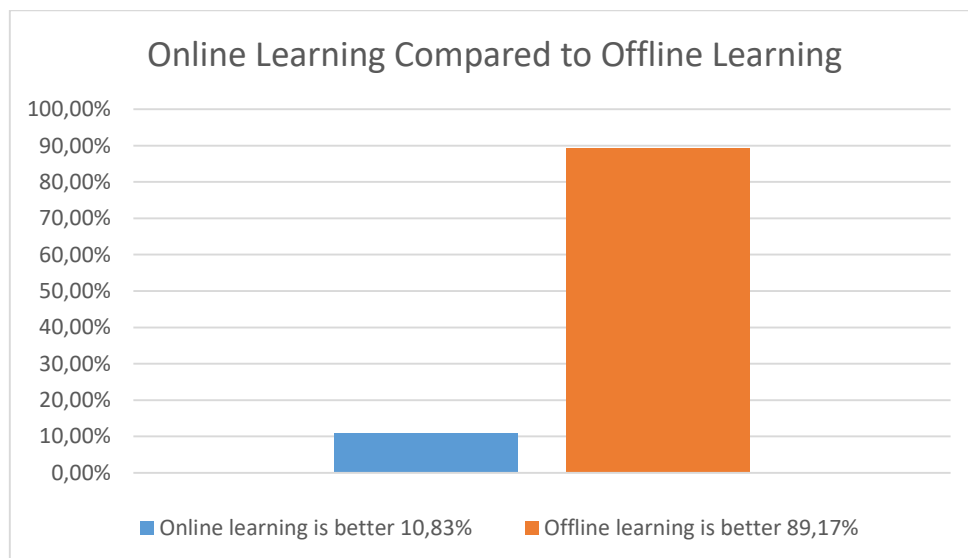


Figure 1. Respondents' answers in the Ministry of Education and Culture Survey

Source: (Online Study Survey: Students Are Ready, Internet is Slow, 2020)

On the other hand, the Regional Leadership of the Nahdlatul Ulama Student Association (IPNU) of East Java also conducted research on online learning with student respondents. The number of respondents in the study was 419 undergraduate students in 34 provinces

throughout Indonesia, the type of research was descriptive qualitative and the data collection technique used surveys. The result shows that 88.75% of respondents stated that the current online learning activity system makes them bored and stressed. The survey results also found that 69.45% of respondents thought that online learning was still not effective (IPNU Survey: 80.67% Students Can't Get Online Learning From Campus, 2020).

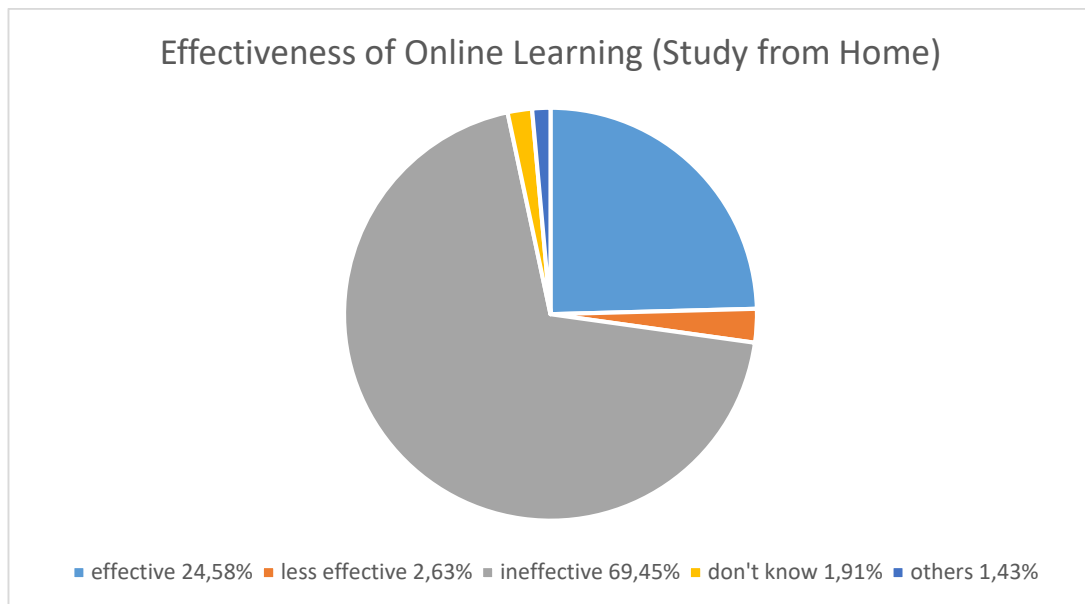


Figure 2. Respondents' answers in the survey

Source: IPNU Survey: 80.67% Students Can't Get Online Learning From Campus, 2020)

The pandemic has changed the way of learning from conventional into online which caused various reactions from the students, including of students at the School of Multi Media "MMTC" Yogyakarta (STMM Yogyakarta). Since the beginning of the COVID-19 pandemic until the even semester of the 2021 – 2022 academic year, STMM Yogyakarta is still carrying out online theoretical lectures, only several practical lectures have started implementing limited face to face learning. Based on the preliminary observation of the researcher in the field, during this online learning, not a few of the School of Multi Media students complained about the ongoing learning activities. The problems that become obstacles include unstable connection problems, lecture times that often change, learning materials that are difficult to understand until the selection of learning media that are not in accordance with teaching materials. Therefore, this study is proposed to determine the effect of using online learning media on student satisfaction at STMM Yogyakarta. This study uses the method of ACTIONS (*Access, Cost, Teaching, Interactivity, Organizational Issues, Novelty, Speed*) to measure the dimension of the use of the media, Meanwhile, to measure the dimension of satisfaction, the EUCS (*End User Computing Satisfaction*) method is used.

Several previous studies have also explained that students are not satisfied with the condition of online learning as today. It is also revealed in a study that the majority of students of STIKES St. Elisabeth Semarang is not satisfied with online learning, especially in understanding the material and the delivering material method (Priyastuti & Suhadi, 2020). It means that the use of good learning media is essential in the learning process so

that the material can be conveyed well and can be easy understood. As shown in a study of FKIP students of Mathematics Education at Almuslim University that the students stated their satisfaction when their campus make good use of learning media (Nurhayati & Zuhra, 2020). Several studies on the satisfaction level of online learning in this pandemic have been carried out, but there are not many studies focused on the effect of using learning media. Another study shows that the use of online media had a significant effect on student satisfaction at ITS NU Pekalongan and Pusmanu Polytechnic (Hakim & Mulyapradana, 2020). The study did not use the ACTIONS and EUCS methods in measuring the dimensions of the variables. Another research that uses the EUCS method in measuring the dimensions of satisfaction is a study of Tidar Magelang University students, but this study only measures the effect of the learning system. The study also only described descriptively and resulted in the conclusion that most Tidar Magelang University students were satisfied with the dimensions of content and accuracy in using ELITA as an online learning application system (Ulinuha & Novitaningtyas, 2021). There have not been many previous studies that have used the ACTIONS method on the variable of learning media utilization.

The definition of satisfaction in the Great Indonesian Dictionary is a sense of pleasure, relief, and so on (*KBBI Daring*, 2022). According to Kotler & Keller (2016), satisfaction is an expression of pleasure or disappointment from a person when comparing their performance and expectations. If something happens beyond expectations, consumers will feel dissatisfied, and vice versa. The context of consumer in this study are students, it is students who will be the object in educational services. The learning process that occurs later will lead to the opinion from the students, whether they feel satisfied or dissatisfied in the learning process. Student satisfaction can be shown with a positive or negative manners, depending on the suitability between student expectations and the learning process services received. Problems will arise if the student's expectations do not match the reality. In this study, learning media is an object in meeting student satisfaction. It is closely related to the concept used by Doll & Torkzadeh (1988) in their research, namely an evaluation model called *End User Computing Satisfaction* (EUCS). EUCS is conceptualized as an affective attitude towards certain computer applications directly, and end user satisfaction, can be evaluated both in terms of the role of primary users and secondary users. There are 5 (five) components of satisfaction in the EUCS model. These five components will later become a benchmark for measuring the level of student satisfaction during the online learning process. These components are namely content, accuracy, form, easy to use, and timeliness. These five indicators will be used to measure student satisfaction variables in order to determine whether or not there is an effect of using online learning media on student satisfaction.

Learning media is an intermediary used in learning design that allows students to later understand the subject matter (Sanjaya & Budimanjaya, 2017). Learning media is used to add learning experiences that sometimes cannot be obtained directly. Learning media can be in the form of teaching aids such as a globe that is used to study a world map in the form of a miniature earth, or pictures to explain the subject matter. Meanwhile, currently learning media have used applications of learning. Sanjaya & Budimanjaya (2017) has also stated that there are several types of learning media, which are learning media through audio, visual, and audiovisual. The example of learning media through audio is sound recording, which involves the sense of hearing. The example of learning media through visual is pictures or charts, which involves the sense of sight. The example of audiovisual learning media is video, which is the most complex media that can completely provide examples or descriptions that are close to reality. Moreover, today's learning media that already use

learning applications can be done in real time, utilizing internet technology, allowing users to communicate directly face to face using devices such as laptops or smartphones. Online learning activities require collaboration, communication, social interaction, reflection, evaluation, and self-directed learning. The technology is growing and the character of now students tends to be online learners who always use online media in the learning process. Therefore, to be able to keep up with the times, online learning designs must always be updated to keep students' attention in the learning process (Dabbagh, 2007). Online learning process requires at least 3 (three) important components, including learning models, learning instructional strategies, and learning media. In relation to the selection of the learning media, Rahmi, et al., (2018) points out that learning media is used as a learning aid that can explain the presentation of information in the learning process itself.

Bates (2005) developed a framework for the use of systematic learning media in the form of a distance learning model that takes into account several factors which are called ACTIONS (*Access, Cost, Teaching and Learning, Interactivity, Organization Issues, Novelty, Speed*). *Access*, defined as the main consideration for the use of learning media. Access is the most important criteria for distance learning. If students cannot access the technology, either because the equipment is not available or they cannot afford an internet data, for example, then any advanced technology will not be useful, no matter how much the technology has benefits. *Cost* is defined as a charge. Cost is the more complex factor. The use of technology for the distance learning process certainly requires not a small cost. The students need devices which can support distance learning, such as laptop or smartphone. It needs certain specifications to be comfortably in using the learning applications. The students also need internet data to access those learning applications. *Teaching and Learning* is a teaching function related to creativity in developing learning methods that utilize technology and media, for example: the use of audiovisual media to make presentations, or the use of learning applications to deliver learning materials. *Interactivity* is various types of interaction supported by technology and media; it can be seen as part of the teaching function. *Organizational Issues* is the support of an institution in the application of a technology. If the institution cannot adequately support the use of this online learning media, for example unable to provide adequate tools for the learning process or unable to provide adequate internet access, then it will enable for many obstacles and problems appear in the online learning process. *Novelty* is an innovation of the growing use of technology, while *Speed* is the quickness of accessing technology and media, such as the speed of internet access.

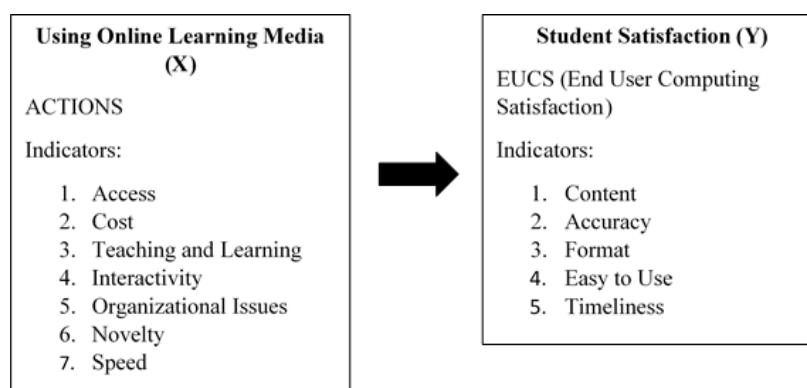


Figure 3. Framework of Thinking

Based on the figure 3 above, the hypothesis in this study is as follows:

H1: There is an effect of using online learning media and the satisfaction of the students of School of Multi Media "MMTC" Yogyakarta.

Harmen et al., (2019) stated that learning media such as the use of video in the learning process can make students feel satisfied. Creative use of learning methods that used by lecturers will also make students feel satisfied. It can be said that students need good learning media in the learning process because it will create satisfaction with the learning process received. From the students' perspective, online learning by utilizing platforms such as WhatsApp, Google Classroom, and Google Meet or Zoom can meet the needs of students in obtaining information and can be used to interact with lecturers in online learning (Swasti, 2020). Therefore, the use of online media in supporting the continuity of learning needs to be considered because it has become a necessity today.

METHOD

The research method is a scientific way to obtain data with a specific purpose and use (Sugiyono & Lestari, 2021). This study uses a quantitative approach, because the focus of this research is to determine the effect of the use of online learning media on the level of satisfaction of STMM Yogyakarta students. Quantitative research is used to examine certain populations or samples by taking samples, collecting data using research instruments, and obtaining hypothesis testing results by using statistical analysis. The population in this study are active students at the School of Multi Media which consists of 6 (six) study programs. The respondents of this study are obtained from 95 students. The data are obtained from distributing questionnaires through *Google Forms*. Statistic is used as the data analysis technique in this quantitative research. This study also uses the classical assumption test. Before doing the classical assumption test, the validity test and the instrument reliability test are done first, after that the classical assumption test such as normality test, heteroscedasticity test, and autocorrelation test are implemented in this study. The data analysis techniques used in this research are simple linear regression analysis, coefficient of determination analysis, and t test. The test was carried out with the help of software for statistics, namely *SPSS 24 for windows*.

RESULTS AND DISCUSSION

Results

This study engaged 95 STMM Yogyakarta students as the respondents. There are 6 study programs at STMM Yogyakarta, namely Manaprodsi (Broadcast Production Management), Manarita (News Production Management), Matekstosi (Broadcast Production Studio Engineering Management), Animation, Game Technology and MIK (Communication Information Management).

Table 1. The distribution of Research Respondents based on the Study Programs

Study Programs	Frequency	Percentage
Manarita	20	21%
Manaprodsi	21	22%
Matekstosi	19	20%
Animasi	8	9%
Teknologi Permainan	4	4%
MIK	23	24%
Total	95	100%

The table 1 shows the distribution of research respondents based on the study programs. Based on the table, it can be seen that the respondents from the Manarita study program were 20 people or 21%, the Manaprodsi study program was 21 people or 22%, the Matekstosi study program was 19 people or 20%, the Animation study program was 8 people or equal to 9%, Game Design study program is 4 people or 4%, and MIK study program is 23 people or 24%.

The table 1 shows that the number of respondents is dominated by the students from the MIK study program, followed by the Manaprodsi, Manarita, Matekstosi, Animation, and Game Design study programs with the least number of respondents.

Validity Test

To measure the validity of the research instrument, it can be done by comparing the correlation between the question item scores and the total variable score. Question items are declared valid if the value of $r_{\text{Count}} > r_{\text{Table}}$, with a value of $r_{\text{Table}} = 0.169$. As for r_{table} is stated by calculating the value of $df = (N-2)$, namely $df = (95-2) = 93$.

Table 2. Validity Test Result

Item	r count	r table	description
The Variable of Utilizing Online Learning Media (X)			
X1	0.816	0.169	Valid
X2	0.916	0.169	Valid
X3	0.889	0.169	Valid
X4	0.878	0.169	Valid
X5	0.796	0.169	Valid
X6	0.902	0.169	Valid
X7	0.779	0.169	Valid
X8	0.803	0.169	Valid
X9	0.886	0.169	Valid
X10	0.898	0.169	Valid
X11	0.934	0.169	Valid
X12	0.846	0.169	Valid
X13	0.863	0.169	Valid
X14	0.877	0.169	Valid
The Variable of Student Satisfaction (Y)			
Y1	0.815	0.169	Valid
Y2	0.918	0.169	Valid
Y3	0.892	0.169	Valid
Y4	0.879	0.169	Valid
Y5	0.792	0.169	Valid
Y6	0.917	0.169	Valid
Y7	0.807	0.169	Valid
Y8	0.810	0.169	Valid
Y9	0.891	0.169	Valid
Y10	0.891	0.169	Valid

Based on the table 2 above, it can be seen that all of the question items can be said to be valid because the value of $r_{count} > r_{table}$ so that the above items are suitable for use as a measuring tool in research.

Reliability Test

Meanwhile, to test the reliability instruments in this study, it can be seen in the *Cronbach's Alpha* value. The questionnaire can be said to be reliable if it has a positive reliability coefficient and is greater than 0.6. The results of the reliability test can be seen in Table 3 for the variable of Online Learning Media Utilization (X) and Table 4 for the variable of Student Satisfaction (Y) as follows:

Table 3. Reliability Test Result of Variable X

Item	Reliability Coefficient	Criteria	Description
Variable of Online Learning Media Utilization (X)			
X1	0.983	0,6	Reliable
X2	0.982	0,6	Reliable
X3	0.982	0,6	Reliable
X4	0.983	0,6	Reliable
X5	0.984	0,6	Reliable
X6	0.982	0,6	Reliable
X7	0.983	0,6	Reliable
X8	0.983	0,6	Reliable
X9	0.983	0,6	Reliable
X10	0.982	0,6	Reliable
X11	0.982	0,6	Reliable
X12	0.983	0,6	Reliable
X13	0.983	0,6	Reliable
X14	0.983	0,6	Reliable

The data in Table 3 above shows that all question items on the variable of online learning media utilization (X) have a reliability coefficient above 0.6 which indicates that each question item is reliable to measure the variables on the instrument used.

Table 4. Reliability Test Result of Variable Y

Item	Reliability Coefficient	Criteria	Description
Variabel of Student Satisfaction (Y)			
Y1	0.983	0,6	Reliable
Y2	0.982	0,6	Reliable
Y3	0.982	0,6	Reliable
Y4	0.983	0,6	Reliable
Y5	0.984	0,6	Reliable
Y6	0.982	0,6	Reliable
Y7	0.983	0,6	Reliable
Y8	0.983	0,6	Reliable
Y9	0.983	0,6	Reliable
Y10	0.982	0,6	Reliable

The data in Table 4 above shows that all question items on the variable of student satisfaction (Y) have a reliability coefficient above 0.6 which indicates that each question item is reliable to measure the variables on the instrument used.

Normality Test

The normality test of the data in this study was carried out using the *One Sample Kolmogorov Smirnov* test. The data can be said to be normally distributed if it has a significance value of more than 0.1, and it is said to be not normally distributed if it has a significance value of less than 0.1. The results of the normality test in this study can be seen in Table 5 below:

Table 5. Normality Test Result

Asymp. Sig. (2-tailed)	Criteria	Description
0.200	0.1	Normal Distribution

Based on the results of the normality test in Table 5 above, it can be seen that the significance value obtained is 0.200 which is greater than 0.1 which means that the data in this study are normally distributed.

Heteroscedasticity Test

Heteroscedasticity test in this study used *Glejser* test. The condition of this test is that if the significance value obtained is greater than 0.1, it means that there is no heteroscedasticity, and if the significance value is less than 0.1, it means that there is heteroscedasticity. The results can be seen in the Table 6 below:

Table 6. Heteroscedasticity Test Result

Deviation From Linearity	Criteria	Description
0.175	0.1	no heteroscedasticity

Based on the result of the heteroscedasticity test in Table 6 above, it can be seen that the significance value of the Deviation from Linearity column is 0.175 which is greater than 0.1. So, it can be said that the data in this study does not occur heteroscedasticity.

Autocorrelation Test

Autocorrelation test in this study used *Durbin-Watson*. The test was conducted to determine the presence or absence of autocorrelation in the regression model. The results of the autocorrelation test can be seen in Table 7 below:

Table 7. Autocorrelation Test Result

DU	DW	4-DU
1.6872	1.821	2.3128

As for the research data requirements, it is said that there is no autocorrelation if the value of $dU < DW < 4-dU$. From the *Durbin-Watson* table, the value of dU is 1.6872 with $k = 1$ and $n = 95$. With dU obtained, the value of 4-dU is 2.3128, so $1.6872 < 2.2820 < 2.3128$. Thus, it can be concluded that the data in this study does not occur autocorrelation.

Simple Linear Regression Analysis

Regression analysis is used to determine the causal relationship of one to another variable. In this study, simple linear regression analysis was used to show the effect of media

utilization variables on student satisfaction variables. The result of simple linear regression analysis in this study is shown in Table 8 below:

Table 8. Simple Linear Regression Analysis Result

Variable	Constant	Coefficient Regression	t count	Sig.
Online learning media utilization	2.695	0.724	93.553	0,00

Based on Table 8 above, a simple linear regression equation for variables X and Y is obtained as follows: $Y' = a + bX = 2.695 + 0.724 X$

From the equation above, it is clear that the constant value is 2,695. It means that the consistency value of the student satisfaction variable is 2,695. In addition, the regression coefficient value for the variable of online learning media utilization as the X variable is 0.724. This shows that for every addition of 1 to the value of online learning media utilization, the value of student satisfaction will increase by 0.724. The regression coefficient is also positive, which explains that if the use of online learning media increases, the satisfaction of STMM Yogyakarta students will also increase.

T – Test

The t-test is used to determine the effect of the independent variable partially on the dependent variable. In this case, it is also shown the level of significance of the influence of variable X (utilization of online learning media) on variable Y (student satisfaction). The condition of this test is that if the t count is more than t table, it can be concluded that the X variable has an influence on the Y variable, a significance number of less than 0.1 will also indicate that the influence between these variables is significant. The result of the t test is shown in table 9 below:

Table 9. T – Test Result

t count	t table	Sig
93.553	1.6614	0,00

Based on Table 9 above, it can be seen that the value of t table is known by the formula $dk = n - 2$, where $n = 95$ then $dk = 95 - 2 = 93$. Based on the value of the t-table distribution with 93 respondents, it can be seen that the t-table value is 1.6614, with a value of 10% or 0.1. Thus, the hypothesis which states "There is an effect of utilizing online learning media on student satisfaction at STMM Yogyakarta" can be accepted. It is indicated by the evidence of the t-test value of $93,553 > 1.6614$. Likewise with the value of sig. < 0.1 which indicates that the effect is significant.

Coefficient of Determination

The number on the coefficient of determination is used to explain how much influence the X variable has on the Y variable. The result of the coefficient of determination in this study is shown in Table 10 below:

Table 10. Coefficient of Determination Result

R	R Square	Adjusted R Square
.985 ^a	.898	.898

In Table 10 above, the result of the coefficient of determination test (R Square) is obtained a value of 0.898 or 89%. It can be interpreted that the variable X (utilization of online learning media) has an influence on the Y variable (student satisfaction) by 89%, while the rest is influenced by other variables that were not examined in this study.

Discussion

Based on the result of the research above, it can be seen that the result of the simple regression analysis equation is $Y = 2.695 + 0.724$. In the equation shows a positive value, where the constant value is obtained with the number 2.695 and the regression coefficient is 0.724. It explains that the consistency of the variable in the use of learning media is 2,695 and the increase in student satisfaction is 0.724 for every additional 1 value in the use of online learning media. The better the use of online learning media, the higher student satisfaction, and vice versa, the worse the use of online media, the lower student satisfaction. Likewise, the measurement of the t_{count} value obtained is 93,553 and t_{table} 1.6614 with the condition that if $t_{\text{count}} > t_{\text{table}}$ then H1 is accepted, so that the t_{count} value is $93,553 > 1.6614$ t_{table} proving that the hypothesis "There is an effect of using online learning media and the satisfaction of the students of School of Multi Media "MMTC" Yogyakarta" can be accepted. It is also known that the significance value of Online Learning Media Utilization on Student Satisfaction in the t-test coefficient table is 0.00, with the condition that if the value of Sig. less than 0.1, then the variable X has a significant effect on the variable Y. Therefore, with the significance value in this t-test $0.00 < 0.1$, it is concluded that the use of online learning media has a significant influence on student satisfaction at STMM Yogyakarta. This also shows that the higher the use of online learning media, the more STMM Yogyakarta student satisfaction is also high, on the other hand, the lower the use of online learning media, the lower the level of satisfaction of STMM Yogyakarta students. As for how much influence the use of online learning media has on student satisfaction, it can be seen from the *R Square* value in simple linear regression analysis. The value of *R Square* obtained is 0.898, which means that the variable of the use of online learning media has an influence of 89% on the variable of student satisfaction, while the rest can be explained by other variables that were not investigated in this study.

The result of this study is in line with Gaffar & Septyandi (2020) research on factors that influence student satisfaction in Bandung when studying during a pandemic, which states that the use of good e-learning as a learning medium can affect student satisfaction. The result of this study is also in line with several previous studies including the effect of using e-Digital Nursing Care Plans (E-DNCP) as a learning medium on the satisfaction level of D III Nursing students at Sultan Ageng Tirtayasa University. The result of this study indicated that the use of e-Digital Nursing Care Plans (E-DNCP) has an effect on student satisfaction (Rustiawati et al., 2021). This research is also in line with research on the influence of online media on student learning satisfaction during the Covid-19 pandemic at SMPN 35 Bekasi. The result of this study also stated that online media has a significant effect on student learning satisfaction, the online media variable has an effect of 60% which is indicated by the R square value of 0.600 (Aureza & Ardin, 2021).

CONCLUSION

Based on the results of research and discussion, the result of the simple regression equation $= 2.695 + 0.724$ is obtained a constant value of 2.695. It means that the consistency value of the student satisfaction variable is 2,695. Besides, the value of the X regression coefficient of 0.724 states that for every additional 1 value in the variable using online learning media, student satisfaction will increase by 0.724 times. This also shows that the higher the use of online learning media, the more STMM Yogyakarta student satisfaction is also high, on the other hand, the lower the use of online learning media, the lower the level of satisfaction of STMM Yogyakarta students. The use of online learning media affects the satisfaction of STMM Yogyakarta students by 89%, while the rest is influenced by other variables that are not in this study. It is proven by the result of the R square test in this study, the R square value of 0.898 was obtained.

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