Determine Factors of Accounting Student Satisfaction in Online Learning

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Keywords: Online Learning, Course Structure, Online Tutorials Flexibility, Online Tutorials Quality, Technology Quality, Student Satisfaction

Abstract: This study aims to determine the influence of course structure, flexibility of online learning, quality of online learning, and quality of technology on student satisfaction in online learning. This research uses independent variables namely course structure, online tutorials flexibility, online tutorials quality, and technology quality. The dependent variable used is student satisfaction. This study used primary data with data collection techniques using questionnaires (web-based questionnaires) that were distributed to students of D3 Accounting and D4 Managerial Accounting in 2020/2021 Politeknik Negeri Batam. Sample withdrawal technique using cluster sampling method. The testing method in this study used multiple regression analysis with the help of SPSS statistical application program Version 25. The results showed that the course structure, online tutorials flexibility, online tutorials quality, and technology quality significantly influenced student satisfaction in online learning.

1 INTRODUCTION

With the development of technology, all aspects are closely related to digitization, so that obtaining information is no longer difficult because it can be done in real time. The use of technology in the field of education is also developing, namely with the existence of e-learning. Michael (2013) explained that e-learning is electronic learning that uses information and communication technology and then held with the aim of learning to use electronic devices or computers to support the learning process. E-learning makes the learning process happen anywhere and anytime, then with the geographical separation between students and teachers, it encourages more people to be involved in learning (Harsasi & Sutawijaya, 2018).

Today, online learning is the main learning method, due to the Covid-19 outbreak and in accordance with the circular letter from Kemendikbud Number 36962/MPK.A/HK/2020 regarding online learning and working from home in order to prevent the spread of corona virus disease (covid-19). This is also carried out by universities, one of which is Politeknik Negeri Batam. Politeknik Negeri Batam applies distance education starting on March 16, 2020 in accordance with circular letter No. 289/PL29/III/2020 concerning vigilance and prevention of the spread of Covid-19 infection within Politeknik Negeri Batam.

Given the increase in learning using e-learning during this pandemic, student satisfaction is important in assessing online learning related to the quality of online learning. Based on research by Harsasi & Sutawijaya (2018), it explains that there are 4 factors that influence student satisfaction, namely course structure, online tutorials flexibility, online tutorials quality and technology quality.

Research by Eom, Wen, & Ashill (2006) explains that the lesson structure has two components, namely learning objectives/expectations and lesson infrastructure. Which learning objectives / expectations must be explained in a syllabus which includes what topics will be studied, expected class participation in online conferences, group assignments and so on. While the learning infrastructure relates to an explanation of the overall use of the online learning site or e-learning so that it can be understood.

In the research of Sun, Tsai, Finger, Chen, & Yeh (2008) revealed that online learning is different from conventional classroom learning, which is not limited by space, time and location. Therefore, students have

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a high degree of flexibility and many opportunities for independent study. This makes the flexibility of online learning to play an important role in student satisfaction and has been shown to have a significant effect on student satisfaction.

Sun, Tsai, Finger, Chen, & Yeh (2008) said that of all the independent variables in their research, the quality of online learning had the strongest relationship with student satisfaction. Because it includes the overall lesson design, teaching materials, and so on. According to him, for a higher level of satisfaction such as scheduling lessons, the arrangement and types of discussions and teaching materials must be prepared properly. This is to help students solve their curriculum and technical difficulties, can reduce students' frustration levels in online learning, thus making the learning experience better.

Research by Harsasi & Sutawijaya (2018) says that the implementation of information and communication technology has been used in the field of education, especially universities. Many higher education institutions use e-learning as a modern learning solution. Therefore, the quality of technology is one of the factors determining student satisfaction.

This research is a replication study which refers to previous research conducted by Harsasi & Sutawijaya (2018). Researchers used the same variables as previous studies, namely using course structure, online tutorials flexibility, online tutorials quality, and technology quality as independent variables and using student satisfaction as the dependent variable. As for what distinguishes it from previous research, it is related to research respondents, where the researcher uses Accounting students at the Politeknik Negeri Batam class of 2020/2021 as the sample.

Although many previous studies have discussed the determinants of student satisfaction in online learning, there are still differences in the results of each previous study. The researcher's contribution is to identify whether the lesson structure, online learning flexibility, online learning quality, and technology quality can affect the satisfaction of Politeknik Negeri Batam Accounting students during the application of online learning. Differences in the results of previous studies are also an important aspect in conducting this research. The researcher hopes that this research can provide an overview and suggestions for the application of online learning.

2 THEORITICAL STUDY

2.1 Constructivism Learning Theory

The theory of constructivism learning according to Piaget (1977) is to believe that learning is a self-discovery process, which is a process that a person goes through because of interacting and observing the environment (self-discovery learning). Piaget believed that people learn and construct their own knowledge. This constructivism learning theory also states that there is a change in the role of the teacher who usually explains material from class to class, now becomes a mediator and facilitator during the online learning process.

2.2 Technology Acceptance Model (TAM)

Considering internet-based online learning, the theoretical perspective of technology adoption is very appropriate to predict the satisfaction of internet-based learning (Arbaugh, 2000). Davis, Bagozzi, & Warshaw (1989) revealed that the Technology Acceptance Model (TAM) shows that beliefs and attitudes towards a technology are the main determinants of whether a technology will be adopted. There are 2 main variables in this model, namely the perception of the usefulness of a technology and the perception of the ease of use of a technology. Davis (1989) said, first, people tend to use or not use the application according to their beliefs, whether it can help in doing a better job. This refers to the first perception of the usefulness of a technology. Second, even if potential users believe that a particular application is useful, they may at the same time believe that the system is too difficult to use and that the performance benefits of using the application outweigh the expected effort of using the application. This means that in addition to usability, use is also theorized to be influenced by perceived ease of use. Perceived usefulness is defined as the extent to which a person believes that using a particular system will improve job performance.

2.3 Literature Review

The study of Eom, Wen, & Ashill (2006) used American students enrolled in online learning without meeting on campus as a sample, whose main research objective was to investigate the determinants of student perceived learning outcomes and satisfaction in distance education using an e-learning system. In this study, lesson structure is considered an important

variable that affects success during the online learning process. Researchers say the structure of the lesson will be highly correlated with user satisfaction and perceived learning outcomes, especially when teaching materials are organized into logical and easy-to-understand components. And also, clear communication regarding learning objectives and procedures, it will increase the level of student satisfaction and perceived learning outcomes.

The research of Sun, Tsai, Finger, Chen, & Yeh (2008) used students from 2 public universities in Taiwan as a sample, this study aims to investigate the factors that influence student satisfaction in the use of e-learning. The researcher revealed that the definition of online learning flexibility is students' perceptions of the efficiency and effects of adopting the use of e-learning during their work, study and travel hours. This makes flexibility an important role in student satisfaction. Because online learning is different from classroom learning in general, which is not limited by space, time and location, it allows students to have a high degree of flexibility and have many opportunities for independent study. By using e-learning, it eliminates the awkwardness associated with face-to-face communication in conventional classrooms. Students can express their thoughts without shame and ask questions through online discussions.

Becta (2002) says that using e-learning provides opportunities for students to develop at a pace and learning time that suits them, to get the information they need. By using e-learning students can meet with other students virtually to ask questions, discuss problems, and even participate in a study forum or group assignment without having to leave their daily activities. E-learning provides opportunities for students to get access whenever they want, and is able to involve other students and lecturers globally.

In a study by Mages & Garson (2010) which investigated whether online tutorials can effectively meet the needs of students and scholars seeking information on how to properly use the APA style citation rule. Researchers are part of the library's initiative to foster information literacy and prevent accidental plagiarism, by designing high-quality online tutorials to teach students to cite sources correctly. With good quality online tutorials, it can increase participants' understanding. The results showed that 98% of respondents said the online tutorial was very useful and increased their understanding of APA style.

The research of Harsasi & Sutawijaya (2018) which uses Open University (UT) students enrolled in 4 core courses in the management department who have taken online learning as a sample, examines what are the determinants of student satisfaction during the online learning process. The research uses lesson structure, online learning flexibility, online learning quality and technology quality as independent variables. And using student satisfaction as the dependent variable. Researchers say with the advancement of knowledge, methods, and techniques related to the field of information and communication technology; it is possible to make significant changes in educational practice. As with the quality of technology, are students able to access online learning anywhere, do not experience problems during the online learning process, are they easy to use, and so on.

2.4 Hypothesis Development

2.4.1 Course Structure

Students can understand teaching materials well and have a high interest in learning, if the teaching materials provided are well structured, the learning objectives are clear, and most importantly easy to understand. In constructivism learning theory it is said that a person learns and builds his own knowledge by interacting and observing the environment. This is what makes students better off when they learn independently at their own time and at their own pace. Based on the description above, the hypothesis is proposed:

H1: Course Structure has a significant effect on Student Satisfaction

2.4.2 Online Tutorial Flexibility

By using e-learning, students can access teaching materials without limitation of time and place. This makes students have a high level of flexibility and have many opportunities for independent study. This is supported by the technology acceptance model (TAM) with one of the perceptions, namely the perception of the usefulness of a technology. The use of technology in online learning makes it easier for students to manage their own study time, not being tied down in the learning process because it can be done anywhere and anytime, which makes student learning activities more effective. So that students can balance their work, family, and personal activities without having to put aside learning. Based on the description above, the hypothesis is proposed:

H2: Online Tutorials Flexibility has a significant effect on Student Satisfaction

2.4.3 Online Tutorial Quality

A well-designed online learning is one of the factors for students in considering online learning itself. This is because quality is an important factor that influences the learning effect and satisfaction during online learning. In the technology acceptance model (TAM), the belief that a technology is useful and easy to use affects the attitude of users towards the technology which will then determine their decision to adopt the technology. In the case of online learning, do students experience / do not experience difficulties in using the features, whether during the internet-based online learning process can improve the quality of learning, and so on. Based on the description above, the hypothesis is proposed:
H3: Online Tutorials Quality has a significant effect on Student Satisfaction

2.4.4 Technology Quality

Advances in knowledge, methods, and techniques related to the field of information and communication technology enable significant changes to educational practice. Rodriguez, Ooms, & Montañez (2008) revealed that most students feel comfortable with activities that use technology, such as using e-mail to send assignments, displaying learning videos on computers and so on. Arbaugh (2000) said that in the context of online learning, showing the perceived usefulness and ease of use of delivery media will improve students' attitudes towards their learning experience. Based on the description above, the hypothesis is proposed:
H4: Technology Quality has a significant effect on Student Satisfaction

Based on the description of the theoretical study, literature review, and hypothesis development that have been described previously, the research model can be seen in Figure 1:

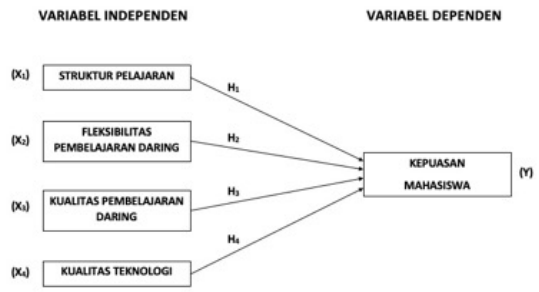

Figure 1: Research Model.

3 RESEARCH METHOD

This study uses a quantitative approach, which is a systematic, planned, and structured research that aims to prove the influence between variables (Hermawan, 2019). There are 2 types of variables used in this study, namely the independent variable and the dependent variable. The independent variables used are course structure, online tutorials flexibility, online tutorials quality, and technology quality. The dependent variable used is student satisfaction. This research data is primary data which uses a research instrument in the form of a questionnaire adopted from previous research (Harsasi & Sutawijaya, 2018).

The object of this research is Accounting students of D3 Accounting and D4 Managerial Accounting at Politeknik Negeri Batam class of 2020/2021 who get Introductory Accounting courses or Basic Financial Accounting in their online learning, both the morning regular class, the employee class (evening), and the industrial class totaling 384 students. To determine the sample size, it is carried out through a statistical approach using the slovin formula (Sugiyono, 2016):

$$n = \frac{N}{1 + N(e)^2}$$

Information:
n = Sample size
N = Population size
e = Tolerance level, using 10% (0.1)

$$n = \frac{384}{1 + 384\ (0{,}1)^2}$$

$$n = \frac{384}{4{,}84}$$

$$n = 79{,}338 \text{ or } 80$$

Figure 2: Sample Size.

Based on the results of calculations using the Slovin formula, the number of samples to be studied in this study were 80 samples.

In this study, the researcher used a probability sampling technique, namely cluster sampling. Then data processing using SPSS version 25. The data analysis techniques used are descriptive statistics, validity tests, and reliability tests. The classical assumption test used is the normality test, multicollinearity test, and heteroscedasticity test. And the hypothesis test used in this study is multiple linear regression and individual parameter significance test (T test).

4 RESULTS

In this study, a sampling technique was used in the form of probability sampling, namely cluster

sampling with respondents taken, namely students/I study programs of D3 Accounting and D4 Managerial Accounting class 2020/2021 Politeknik Negeri Batam. The population used in this study amounted to 384 based on predetermined criteria. The sample used in this study were 80 respondents.

4.1 Descriptive Statistical Analysis

Below is a descriptive statistical analysis table:

Table 1: Descriptive Statistical Analysis.

	N	*Min.*	*Max.*	*Mean*	*Std. Deviation*
Course Structure	80	8	20	14,96	2,441
Online Tutorials Flexibility	80	10	35	24,55	5,384
Online Tutorials Quality	80	16	34	24,59	4,292
Technology Quality	80	20	40	28,94	5,328
Student Satisfaction	80	10	25	17,51	3,379

4.2 Instrument Test Results

4.2.1 Validity Test

To find out whether a list of questions/statements is feasible or not, that is by conducting a validity test on the question items (Sujarweni, 2019). The results of R (Correlation coefficients) are compared with R Tables where df = n-2 with sig 5%, in this study using as many as 30 respondents, the df obtained = 28 and the R table value = 0.361. Statement items can be said to be valid if R Count > 0.361. The following are the results of the validity of the research data:

Table 2: Validity Test.

Variabel	Item	R Hitung	R Tabel	Keterangan
Course Structure	MK1	0,765	0,361	Valid
	MK2	0,676	0,361	Valid
	MK3	0,813	0,361	Valid
	MK4	0,837	0,361	Valid
Online Tutorials Flexibility	F1	0,835	0,361	Valid
	F2	0,897	0,361	Valid
	F3	0,816	0,361	Valid
	F4	0,748	0,361	Valid
	F5	0,922	0,361	Valid
	F6	0,683	0,361	Valid
	F7	0,704	0,361	Valid
Online Tutorials Quality	Q1	0,602	0,361	Valid
	Q2	0,729	0,361	Valid
	Q3	0,815	0,361	Valid
	Q4	0,606	0,361	Valid
	Q5	0,784	0,361	Valid
	Q6	0,770	0,361	Valid
	Q7	0,674	0,361	Valid
Technology Quality	TC1	0,559	0,361	Valid
	TC2	0,757	0,361	Valid
	TC3	0,870	0,361	Valid
	TC4	0,820	0,361	Valid
	TC5	0,674	0,361	Valid
	TC6	0,748	0,361	Valid
	TC7	0,760	0,361	Valid
	TC8	0,688	0,361	Valid
Student Satisfaction	S1	0,904	0,361	Valid
	S2	0,716	0,361	Valid
	S3	0,644	0,361	Valid
	S4	0,653	0,361	Valid
	S5	0,730	0,361	Valid

Based on the table above, it is known that all items in the statement list have an R greater than R Table, which means that all statement items from the variables used in this study are declared valid to be used as measuring instruments.

4.2.2 Reliability Test

The reliability test is a measure of the stability and consistency of respondents in answering a list of questions/statements (Sujarweni, 2019). A variable can be said to be reliable if it has a Cronbach's alpha value greater than 0.60. The results of the reliability test are shown in the following table:

Table 3: Reliability Test.

Variabel	Jumlah Item	Reliabilitas		
		Alpha Cronbach	*Cut Off Alpha Cronbanch*	Keterangan
Course Structure	4	0.767	0.60	Reliabel
Online Tutorials Flexibility	7	0.903	0.60	Reliabel
Online Tutorials Quality	7	0.819	0.60	Reliabel
Technology Quality	8	0.873	0.60	Reliabel
Student Satisfaction	5	0.767	0.60	Reliabel

Based on the table above, it is known that all variables have a Cronbach's alpha value greater than 0.60. So, it can be concluded that the questionnaire used is reliable.

4.3 Classic Assumption Test

4.3.1 Normality Test

In this study, the normality test of the Kolmogorov Smirnov one sample method was used to determine whether the data distribution was normally distributed or not. The decision-making criteria is that if the significance value is > 0.05 then the data is said to be normally distributed. The results of the normality test are shown in the following table:

Table 4: Normality Test.

	Unstandardlized Residual
Kolmogorov Smirnov	0.05
Asymp.Sig. (2-tailed)	0.200

Based on the table shows a significance value of 0.200 > the Kolmogorov-Smirnov value of 0.05. So, it can be concluded that the data is normally distributed.

4.3.2 Multicollinearity Test

A good regression model should not have a correlation between the independent variables. It can be seen through the Tolerance and Inflation Factor (VIF) values, the VIF value must be < 10 and the

tolerance value > 0.1. The results of the multicollinearity test are shown in the following table:

Table 5: Multicollinearity Test.

	Collinearity Statistics	
	Tolerance	VIF
Course Structure	0.575	1.739
Online Tutorials Flexibility	0.536	1.866
Online Tutorials Quality	0.380	2.629
Technology Quality	0.434	2.304

It can be seen that the Tolerance value > 0.1 and the VIF value < 10, it can be concluded that there is no multicollinearity in the regression model.

4.3.3 Heteroscedasticity Test

In this study using the heteroscedasticity test with the glejser test, which is regressing between the independent variables and the absolute value of the residual (Priyastama, 2017). If the significance value between the independent variable and the absolute residual is more than 0.05, then there is no heteroscedasticity. The results of the heteroscedasticity test are shown in the following table:

Table 6: Heteroscedasticity Test.

	Sig.
Course Structure	0.944
Online Tutorials Flexibility	0.095
Online Tutorials Quality	0.513
Technology Quality	0.050

The results above show that the significance value of the four independent variables is more than 0.05, so it can be concluded that there is no heteroscedasticity.

4.4 Hypothesis Testing Results

4.4.1 Multiple Linear Regression Analysis

Multiple linear analysis is an analysis to measure the magnitude of the influence between two or more independent variables on one dependent variable (Priyastama, 2017). The results of multiple linear regression calculations are shown in the following table:

Table 7: Multiple Regression Analysis.

	Sum of Squares	df	Mean Square	F	Sig.
Regression	702.597	4	175.649	66.070	.000
Residual	199.390	75	2.659		
Total	901.988	79			

4.4.2 Hypothesis Test

Table 8: Hypothesis Test.

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-1.933	1.285		-1.504	.137
Course Structure	.228	.099	.165	2.299	.024
Online Tutorials Flexibility	.098	.047	.156	2.098	.039
Online Tutorials Quality	.386	.069	.490	5.564	.000
Technology Quality	.144	.052	.227	2.750	.007

Based on the table above, the regression equation formed is:

$$Y = -1{,}933 + 0{,}228X_1 + 0{,}098X_2 + 0{,}386X_3 + 0{,}144X_4 + e \quad (1)$$

4.4.3 T Test

Using the statistical method of partial t-test to determine whether the hypothesis is accepted or rejected. The test is carried out using a correlation significance of 0.05 in order to find out each of the independent variables on the dependent variable partially (Santoso, 2018). The results of the statistical analysis of the t test are shown in the following table:

Table 9: T Test.

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-1.933	1.285		-1.504	.137
Course Structure	.228	.099	.165	2.299	.024
Online Tutorials Flexibility	.098	.047	.156	2.098	.039
Online Tutorials Quality	.386	.069	.490	5.564	.000
Technology Quality	.144	.052	.227	2.750	.007

4.5 Data Analysis

The following is a summary table of test results from this study:

Table 10: T Summary of Test Result.

Hypothesis	Hypothesis Statement	Sig.	Result
H1	Course structure significantly affects student satisfaction	.024	Supported
H2	The flexibility of online learning significantly affects student satisfaction	.039	Supported
H3	The quality of online learning significantly affects student satisfaction	.000	Supported
H4	Technology quality significantly affects student satisfaction	.007	Supported

4.5.1 Effect of Course Structure on Student Satisfaction

Based on the results of the hypothesis in Table 10, it shows that H1 is supported, namely the course structure affects student satisfaction, because the measurement of the lesson structure based on the statement indicators in the questionnaire has a significant effect on student satisfaction. The results of this study are consistent with previous research by Eom, Wen, & Ashill (2006) which stated that students can understand teaching materials well and have a high interest in learning if the teaching materials provided are well structured, clear learning objectives, and easy to understand.

Research conducted by Swan, Matthews, Bogle, Boles, & Day (2012) states the same thing that the lesson structure affects the process of a learning and satisfactory learning outcomes for students, if the educational institution manages the lesson structure into an interesting component. This is also supported by constructivism learning theory which says someone is better off when they learn independently at their own pace and time. With an easy-to-understand lesson structure, it will increase students' enthusiasm and interest in learning.

4.5.2 Effect of Online Tutorial Flexibility on Student Satisfaction

Based on the results of the hypothesis in Table 10, it shows that H2 is supported, namely the flexibility of online learning affects student satisfaction, because the measurement of online learning flexibility based on the statement indicators in the questionnaire has a significant effect on student satisfaction. The results of this study show the same results as previous research conducted by Sun, Tsai, Finger, Chen, & Yeh (2008) which stated that students have a high degree of flexibility and have many opportunities for independent study because students can access teaching materials without time restrictions. and place.

The same thing was also expressed by research conducted by Becta (2002), that e-learning makes it easier for students to access various subjects anytime and anywhere, then students can manage their own study time and how long they want to study. This is also supported by the theory of technology acceptance model (TAM) with one of its perceptions, namely the usefulness of a technology, with the existence of technology in online learning that makes it easier for students to manage their own study time so that they are not bound by time and place so that learning activities are more effective.

4.5.3 Effect of Online Tutorial Quality on Student Satisfaction

Based on the results of the hypothesis in Table 10, it shows that H3 is supported, namely the quality of online learning affects student satisfaction, because measuring the quality of online learning based on the statement indicators in the questionnaire has a significant influence on student satisfaction. The results of the study show the same results as previous research. Sun, Tsai, Finger, Chen, & Yeh (2008) stated that one of the factors that influence the satisfaction effect of online learning is well-designed/managed online learning.

Research conducted by Mages & Garson (2010) also states the same thing, it is said that there is a need for good quality online learning to meet student understanding. This is supported by the TAM theory which says that useful and easy-to-use technology affects user attitudes which will then determine their decision to use the technology. However, research conducted by Harsasi & Sutawijaya (2018) states that the quality of online learning does not affect student satisfaction due to the lack of quality of online learning, especially in education providers in Indonesia. Online learning is not yet fully implemented, and also the lack of interaction from students and lecturers during the implementation of online learning. So, this is a special concern for education providers in Indonesia to pay more attention to the quality of online learning.

4.5.4 Effect of Technology Quality on Student Satisfaction

Based on the results of the hypothesis in Table 10, it shows that H4 is supported, namely the quality of technology affects student satisfaction, because the measurement of technology quality based on the statement indicators in the questionnaire has a significant effect on student satisfaction. The results of the research conducted have the same results as previous research conducted by Harsasi & Sutawijaya (2018) which states that advances in knowledge in the field of technology allow significant changes to educational practice. Like whether students can access and also use the technology. The research of Rodriguez, Ooms, & Montañez (2008) also stated that most students prefer activities that use technology. For example, sending assignments via e-mail.

This is also supported by the TAM theory which states the extent to which a person believes that using

technology will improve his work performance, and also the extent to which a person believes that using technology will make him free from effort. In the context of online learning, showing the perceived usefulness and ease of use of delivery media will improve students' attitudes towards their learning experience. However, research conducted by Sun, Tsai, Finger, Chen, & Yeh (2008) revealed something different, it was said that the quality of technology did not affect student satisfaction in online learning. This is because most e-learning systems are built and implemented in an environment that has a high-speed network, making it easy to carry out activities online. So that students do not have to worry about technical difficulties during the online learning process.

5 CONCLUSIONS

Based on the results of the research that has been described previously, the conclusions of this study are:

a) The lesson structure directly has a positive and significant effect on student satisfaction. This is because the presentation of material at the Batam State Polytechnic is well structured which is related to learning objectives, learning materials, and also the structure of teaching materials. So that students feel it is easier to get and understand teaching materials even though they are online. This makes students have a great interest in learning independently. We hope you find the information in this template useful in the preparation of your submission.
b) The flexibility of online learning directly has a positive and significant effect on student satisfaction. Because online learning provides flexibility in managing time between studying and other activities, so students can manage their time more effectively. Students can also set when they want to access teaching materials, and can also access teaching materials wherever they want. Unlike during conventional learning, online students can get teaching materials even though they don't come to campus. Students can also determine their own study time and how long they want to study. This makes students feel more effective when learning is done online.
c) The quality of online learning directly has a positive and significant effect on student satisfaction. This is because so far online learning at the Pliteknik Negeri Batam has good quality, then has an attractive appearance so that students are interested in opening the e-learning system and accessing teaching materials, then it is easy to use its features so that students do not find it difficult to get teaching materials.
d) The quality of technology directly has a positive and significant effect on student satisfaction. This is because thanks to technology students can access learning anywhere and anytime, have useful functions, and help in getting/learning material. Especially in Batam City which has access and fast internet network, making it easier for students to apply online learning.

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