The effect of teacher teaching, learning methods and students' perceptions on the student's learning achievement in Medan city

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Article Info

ABSTRACT

Learning achievement is something that cannot be separated from learning activities because learning achievement is the output of the learning process. Student achievement is influenced by two main factors, namely factors from within the student (Internal) and factors originating from outside the student or the environment (External). The research method used is quantitative data method. Qualitative research as a human instrument, serves to determine the focus of research, select informants as data sources, assess data quality, analyze data, interpret data and draw conclusions from the findings. The results of the study using t-test (partial) showed that the Teacher Teaching Method variable (X1) had an effect on the student achievement variable (Y), then the online learning method (X2) had an effect on student achievement (Y).

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Introduction

WHO (the World Health Organization) revealed the appearance of a case of pneumonia of unknown etiology found in the city of Wuhan, China (Lee, 2020), which rapidly spread throughout China (Guan et al., 2020). The new coronavirus, which has spread from China to 26 nations so far, does not appear to be like existing lethal viruses, according to the World Health Organization (Mahase, 2020). The epidemic (COVID-19) has shut down hospitals, businesses, schools, and many other services (Rundle, A. G., Park, Y., Herbstman, J. B., Kinsey, E. W., & Wang, 2020). Teachers have a responsibility to adhere to all laws and regulations and to seek out means of facilitating pupils' education when they are at home. Since the notion of learning employs the e-learning approach, the learning model has changed, but the aim remains the same. What has changed, however, is the supporting facilities and infrastructure employed (Kurniasih, 2020). When it comes to the economy, health care, and schooling, Indonesia is no different from any other country that has been hit. The Indonesian government has banned all face-to-face education from elementary school through university in an effort to stop the spread of the deadly COVID-19 virus (Kurniawan, 2020).

Learning achievement is something that cannot be separated from learning activities because learning achievement is the output of the learning process as stated by (Tohirin, 2015). Learning achievement is obtained from what has been achieved by students after students carry out learning activities. The success of a student in learning can be seen from the learning achievement of the student concerned, learning achievement as a value, is the final formulation given by the teacher in terms of progress in learning achievement that has

been achieved by students during a certain time where the success rate is then marked with a value scale in the form of letters or letters. word or symbol.

Student achievement is influenced by two main factors, namely factors from within the student (Internal) and factors that come from outside the student or the environment (External). Internal factors are factors that exist in the organism itself, for example: maturity/growth factors, intelligence, training, motivation, study habits (study discipline) and personal factors (interest, attention, attitude). External factors are factors that are outside of themselves, for example: family factors, teachers and their teaching methods, tools/media used in the teaching and learning process, environment, and available opportunities.

Table 1. Results of Data Analysis of Student Achievement Values from Before the Covid-19
Pandemic and During the Pandemic in the 2016 – 2021 Academic Year

Year	Annual Average	Average
2016	6.586	
2017	6.866	6.885
2018	7,202	
2019	7.216	
2020	7.306	7.210
2021	7.107	

Source: secondary data processed 2021

Analysis of data on subjects per year, the average value data in one training subject from the 2015-2019 school year has increased every year, but in 2020 it decreased when carrying out the online learning process in the midst of the covid-19 pandemic. The phenomenon that occurs student achievement is strongly influenced by various factors, both from within (internal factors) and from outside (external factors). However, related to this research, the factor that wants to be revealed or used as a variable is the use of online learning media. The use of good learning media in the teaching and learning process in the midst of the COVID-19 pandemic is expected to encourage students to study maximally to obtain the best possible achievements. In addition to the use of learning media, the factors that influence learning achievement are student perceptions. If the use of learning media is good, it is possible that student learning achievement will increase.

The online learning method is learning that is able to bring together students and teachers to carry out learning interactions with the help of the internet (Kuntarto, 2017). Learning media can be interpreted as an educational aid or teaching aid which can be in the form of Audio-Visual Aids as a means of communicating between teachers and students in the teaching and learning process. Learning media is equipment that can be used or not used depending on the instructional objectives of the subject matter. According to research (Ariyanto et al., 2018) stated in his research that the most complete type of learning media was the learning media found in school B, namely print, visual, audiovisual, realia, games, electronic or computer media. While the types of media in school A are print media, visual, realia, games. Types of media in school C are print, visual, audio-visual, realia, games, electronic or computer media. Based on the data from the assessment results of each aspect of the online learning method, it can be explained as follows:

Table 2. Categories of Learning Implementation Results fromng

Aspect	Total Score Average	(%)	Category
Motivation (V1)	21.06	76.88	Well
Teaching Materials (V2)	14.83	62.13	Enough
Implementation of Learning (V3)	13.59	63.35	Enough
Evaluation and Learning Outcomes (V4)	18.54	63.13	Enough
Problem (V5)	21.44	74.15	Tall
Average	15.49	61.13	Enough

Source: 2021 Data Processing

To facilitate the meaning of the aspects that are the object of observation, a diagram is made in table 2 Percentage of Average Aspect Scores V1, V2, V3, V4 and V5. Student perception is a direct response from an absorption or process of a person/student knowing several things through sensing. Perception has a subjective nature, because it depends on the abilities and circumstances of each individual, so it will be interpreted differently by one individual to another. Students' perceptions of teachers are very influential because: "All students know from their own experience that the teacher plays a very important role in the whole learning process in the classroom. Students expect a lot from teachers. If those expectations are met, students will feel satisfied, otherwise they will feel disappointed." (Winkel, 2009).

The calculation of the average score of each student will be presented so that it can provide conclusions about students' perceptions of online learning. The following is the average and percentage of answers from each student:

Table 3. Recapitulation of Average Scores and Student Perceptions

	Score	Percentage	Category
Total	3115		
Average	50.917	76%	Well

Source: 2021 Data Processing

Table 3 states that students' perceptions of the online learning process get a score of 3115 or an average student answer of 50.917 with a percentage of 76% and is in the "Good" category. Thus it can be said that students' perceptions of online learning are good.

The fact that through the right media will help students in perceiving something, in other words the media can build the same perception for every student. Judging from the first basic principle, perception is relatively not absolute, meaning that perception is related to a particular event. Second, perception is selective, meaning that not every event can be perceived. Each individual will only perceive events that can interest him. Events that do not stimulate his senses will not be perceived. Third, perception can be influenced by one's expectations, meaning that one will perceive when the stimulus that comes is as expected.

Due to the large number of public junior high schools in Medan City, it is important to conduct research to formulate strategies for achieving and improving student learning achievement in the midst of the COVID-19 pandemic by considering several factors that influence student achievement. This will be studied in more depth in this study. The following is the supporting data for the research, namely the list of State Junior High Schools in Medan City.

Submission of Learning
Delivery of learning is a process that is arranged in such a way according to certain steps so that the implementation achieves the expected results (Sudjana, 2010). According to Syaiful Bahri and (Djamarah & Zain, 2010) the implementation of learning is an activity that has educative value, educative value colors the interactions that occur between teachers and students. Interactions that have educational value are because the implementation of the learning carried out is directed to achieve certain goals that have been formulated before the implementation of learning begins. In the implementation of learning, the teacher performs several stages of learning implementation, including:

Opening lessons Opening lessons are activities carried out by teachers to create a learning atmosphere that allows students to be mentally prepared to take part in learning activities in this activity. In opening the lesson the teacher usually opens with greetings and student attendance, and asks about the previous material.

Online Learning Media
A more complete understanding of learning media is presented by (Munadi, 2008) everything that can convey and distribute messages from sources in a planned manner so as to create a conducive learning environment where the recipient can carry out the learning process efficiently and effectively. In particular, the notion of media in the learning process tends to be interpreted as graphic tools, diagrams, slides (ppt) which function to convey messages or visual or verbal information.

The quality of education is one of the educational problems that must be an important spotlight in improving the education system, especially with regard to the quality of learning. From the various conditions and potentials that exist, efforts that can be made to improve the quality are to develop student-oriented learning. Student-oriented learning can be done by building a learning system that allows students to have the ability to learn to be more interesting, interactive, and varied. Students must be able to have competencies that are useful for their future. Along with the development of technology and its supporting infrastructure, efforts to improve the quality of learning can be carried out through the use of such technology in a system known as online learning.

Learning achievement
Learning achievement is a change in attitude and behavior after receiving lessons or after learning something (Hamalik, 2010). According to Drs. H. Abu Ahmadi explains the definition of learning achievement as follows: "In theory, if an activity can satisfy a need, then there is a big tendency to repeat it". Sources of learning reinforcement can be extrinsic (values, recognition, appreciation) and can be extrinsic (excitement to investigate, interpret situations). In addition, students need / and must receive direct feedback on the degree of success in carrying out tasks (report scores / test scores).

Learning can bring a change in the individual who learns. This change is an experience of behavior from being less good to being better. Experience in learning is an experience aimed at the results to be achieved by students in the learning process at school. Learning achievement is the result achieved (done, done), in this case learning achievement is the result of work, the result of creation by someone who is obtained with thorough work and struggles that require thought. Based on the description above, it can be said that the learning achievement achieved by students involves all the potential they have after the students carry out learning activities. The achievement of learning outcomes can be known by conducting an assessment of learning outcomes tests. Assessment is held to determine the extent to which students have succeeded in following the lessons given by the teacher. In addition, teachers can find out the extent of the success of teachers in the teaching and learning process in schools.

Method

Research design is the entire procedure for planning, and implementing research which includes procedures for data collection and data processing that have been determined. In carrying out a research, a researcher must develop a research design that is adapted to the type and purpose of the research. In accordance with the objectives of the study and the nature of the problem to be studied, this study used quantitative descriptive with a correlation research type. This study places the influence of learning delivery, and learning media on student achievement.

Data collection techniques are carried out by means of questionnaires, namely a number of questions or written statements about factual data or opinions related to respondents that are considered facts or truths that are known and need to be answered by respondents. and the questionnaires were distributed online. An interview is a data collection technique if the researcher wants to conduct a preliminary study to find the problem to be investigated, but also if the researcher wants to know things from the respondent more deeply. Literature study, according to Nazir (2013), is a data collection technique conducted by conducting a study of books, literature, notes, and reports that have to do with the problem being solved. This study uses multiple linear regression analysis as a tool to analyze data processed with the SPSS 2 . program5. The model used in explaining this research uses the equation:

$$Y = a + b1X1 + b2X2 + b3X3 + e.$$

Results and Discussions

Data obtainedthen tested using the classic assumption test in order to get good results. After the classical assumption test was carried out, the data were analyzed using multiple linear regression analysis techniques and tested the hypothesis to see the effect of the dependent variable on the independent variable and to determine the coefficient of determination to see how big the contribution of the independent variable was to the dependent variable.

Classic assumption test
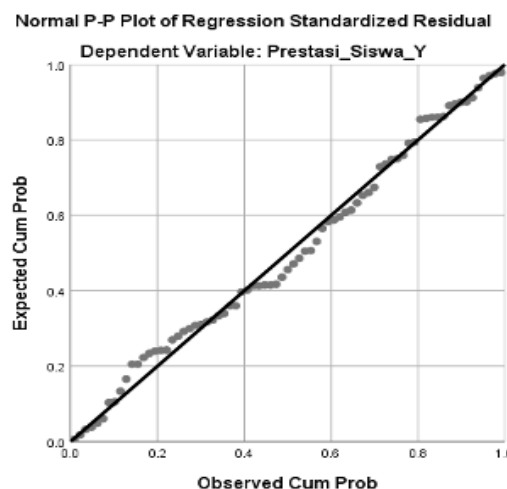
Source: Data processed from attachment (2021)

Figure 1. Normal P Plot

Before testing the hypothesis in this study, a classical assumption test will be carried out first. The classical assumption test consists of normality test, multicollinearity testand heteroscedasticity test. Normality test aims to test whether in the regression model, the confounding or residual variables have a normal distribution (Ghozali, 2016). Testing the normality of the data can be done using two methods, graphs and statistics.

Data that is normally distributed will form a straight diagonal line and plotting residual data will be compared with a diagonal line, if the distribution of residual data is normal, the line that describes the actual data will follow the diagonal line (Ghozali, 2016).

The multicollinearity test aims to determine whether there is a correlation between the independent variables in the regression model. The multicollinearity test in this study is seen from the tolerance value or variance inflation factor (VIF).

Table 4. Multicollinearity Test Results

Model	Collinearity Statistics	
	Tolerance	VIF
1 (Constant)		
How to_Teach_Teacher_X1	.815	1.226
Method_Learning_Online_X2	.892	1.121
Perception_Student_X3	.746	1.341

a. Dependent Variable: Achievement_Student_Y

Source: Data processed from attachment 4 (2021)

Based on table 4.1, it can be seen that the tolerance value of Teacher Teaching Style (X1) is 0.815, Online Learning Method (X2) is 0.892, Student Perception (X3) is 0.746 where all of them are greater than 0.10 while the VIF value of Teaching Method Teachers (X1) are 1.226, Online Learning Methods (X2) are 1.121, Student Perceptions (X3) are 1.341, all of which are less than 10. Based on the results of the above calculations, it can be seen that the tolerance value of all independent variables is greater than 0.10. and the VIF value of all independent variables is also smaller than 5 so that there is no correlation symptom in the independent variables. So it can be concluded that there is no symptom of multicollinearity between independent variables in the regression model.

The heteroscedasticity test aims to test whether from the regression model there is an inequality of variance from the residuals of one observation to another observation. A good regression model is one with homoscedasticity or no heteroscedasticity. One way to detect the presence or absence of heteroscedasticity is the Glejser test, in the Glejser test, if the independent variable is statistically significant in influencing the dependent variable, then there is an indication of heteroscedasticity. On the other hand, if the independent variable is not statistically significant in influencing the dependent variable, then there is no indication of heteroscedasticity. This is observed from the significance probability above the 5% confidence level (Ghozali, 2016).

Table 5. Glejser Test Results

Coefficientsa		
Model	t	Sig.
1 (Constant)	2,471	.016
How to_Teach_Teacher_X1	-.703	.485
Method_Learning_Online_X2	-.706	.482
Perception_Student_X3	-.543	.589

a. Dependent Variable: Abs_RES

Source: Data processed from attachment 4 (2021)

Based on the above test, the significance value of Teacher Teaching Method (X1) is greater than 0.05 (5%) that is 0.485, the test of the significance value of the Online Learning Method (X2) is greater than 0.05 (5%) which is 0.482, the test of the significance value of Perception Student (X3) is greater than 0.05 (5%) which is 0.589 then there is no indication of heteroscedasticity.

Multiple Linear Regression Analysis

Multiple linear regression testing explains the magnitude of the role of Teacher Teaching Method Variables (X1), Online Learning Methods (X2), Student Perceptions (X3) on Student Achievement (Y).

Table 6. Multiple Linear Regression Results

Coefficientsa

Model	B	Std. Error
1 (Constant)	8,684	2008
How to_Teach_Teacher_X1	.276	.070
Method_Learning_Online_X2	.341	.083
Perception_Student_X3	.060	.081

a. Dependent Variable: Achievement_Student_Y

Based on these results, the multiple linear regression equation has the formulation: Y = a + b1X1 + b2X2 + b3X3 + , so that the equation is obtained: Y = 8.684 + 0.276 X1 + 0.341 X2 + 0.060 X3 +

Hypothesis testing
The t statistic test is also known as the individual significance test. This test shows how far the influence of the independent variable partially on the dependent variable.

Table 7. Partial Test (t)

Model	t	Sig.
1 (Constant)	4.325	.000
How to_Teach_Teacher_X1	3,931	.000
Method_Learning_Online_X2	4099	.000
Perception_Student_X3	.741	.461

Dependent Variable: Achievement_Student_Y

Source: Data processed from attachment 4 (2021)

Hypothesis Testing the Effect of Teacher Teaching Variables (X1) on Student Achievement Variables (Y). From table 4.4, the tcount value is 3.931. With = 5%, ttable (5%; 75-3 = 72) the ttable value is 1.993. From the description it can be seen that tcount (3.931) > ttable (1.993), as well as the the significance is 0,000<0.05, it can be concluded that the hypothesisfirst accepted, it meansVariableHow to Teach Teachers (X1)significant effect on the VariableStudent achievement(Y). Hypothesis Testing the Effect of Online Learning Method Variables (X2) on Student Achievement Variables (Y).

From table 4.4 obtained the tcount value of4.099With = 5%, ttable (5%; 75-3 = 72) the value of ttable is 1.993. From this description it can be seen that tcount (4.099) > t table (1,993), and the significance value is0.000<0.05, it can be concluded that the second hypothesis is accepted, meaning that Variable Online Learning Method (X2) significant effecton Student Achievement Variables (Y). Hypothesis Testing the Effect of Student Perception Variables (X3) on Student Achievement Variables (Y). From table 4.4 obtained the tcount value of0.741With = 5%, ttable (5%; 75-3 = 72) the value of ttable is 0.461. From the description it can be seen that tcount (0.741) < t table (1,993), and the significance value is0.461> 0.05, it can be concluded that the third hypothesis is rejected, meaning thatVariableStudent Perception (X3)no significant effecton Student Achievement Variables (Y).

F Test (Simultaneous)

Table 8. Simultaneous Test Results (F)

ANOVAa

Model	F	Sig.
1 Regression	12,912	.000b
Residual		
Total		

a. Dependent Variable: Achievement_Student_Y
b. Predictors: (Constant), Persepsi_Student_X3, Method_Learning_Online_X2, Cara_Mengajar_Guru_X1

Source: Data processed from attachment 4 (2021)

Obtained the value of Fcount of12,912With = 5%, dk numerator : 3, dk denominator : 75-3-1 (5%; 3; 71) obtained Ftable value of 2.73 From the description it can be seen that Fcount (12,912) > Ftable (2.73), and a significance value of 0,000<0.05, it can be concluded that the fourth hypothesis is accepted, meaning

thatVariableHow to Teach Teacher(X1), VariableOnline Learning Method(X2), VariableStudent Perception(X3) has a significant effect simultaneously (simultaneously) on the Student Achievement Variable (Y).

Coefficient of Determination (R2)

The value used to see the coefficient of determination in this study is in the adjusted R square column. This is because the adjusted R square value is not susceptible to the addition of independent variables. The value of the coefficient of determination can be seen in the following table:

Table 9. Coefficient of Determination

Model Summaryb			
Model	**R**	**R Square**	**Adjusted R Square**
1	.594a	.353	.326

a. Predictors: (Constant), Persepsi_Student_X3, Method_Learning_Online_X2, Cara_Mengajar_Guru_X1
b. Dependent Variable: Achievement_Student_Y
Source: Data processed from attachment 4 (2021)

Based on table 4.6, it can be seen that the adjusted R square value is 0.326 or 32.6%. This shows that the Teacher Teaching Method Variable (X1), Online Learning Method variable (X2), Student Perception (X3) can explain Student Achievement Variable (Y) of 32.6%, the remaining 67.4% (100% - 32.6%) is explained by other variables. In his journal, (Rohmah & Marimin, 2015) stated that teaching skills are the skills or abilities of teachers in conveying knowledge or subject matter. A professional teacher must be able to demonstrate various teaching skills as a whole and maintain integrity in the teaching and learning processes he manages.

Conclusions

Based on the results of research and discussion in the previous chapter, it can be concluded that the first hypothesis proposed states that Teacher Teaching Method (X1) has an effect on Student Achievement(Y)to teachers at UPT SMP Negeri Medan City. From the results of processing SPSS 25, it shows that the value of tcount > ttable, it can be concluded that the first hypothesis is accepted, meaning that the Teacher's Teaching Method (X1) has an effect on Student Achievement.(Y)to teachers at UPT SMP Negeri Medan City. The second hypothesis proposed states that the Online Learning Method (X2) has an effect on student achievement(Y)to teachers at UPT SMP Negeri Medan City. From the results of processing SPSS 25, it shows that the value of tcount > ttable, it can be concluded that the second hypothesis is accepted, meaning that the Online Learning Method (X2) has an effect on student achievement.(Y)to teachers at UPT SMP Negeri Medan City. The third hypothesis proposed states that Student Perception (X3) has an effect on Student Achievement(Y)to teachers at UPT SMP Negeri Medan City. From the results of SPSS 25 processing shows that the value of tcount < ttable, it can be concluded that the third hypothesis is rejected, meaning that Student Perception (X3) affects student achievement. (Y) to teachers at UPT SMP Negeri Medan City. The fourth hypothesis put forward states that the Teacher's Way of Teaching (X1), Variable Online Learning Method (X2), Variable Student Perception (X3), have a joint or simultaneous effect on Student Achievement (Y) to teachers at UPT SMP Negeri Medan City. From the results of processing SPSS 25, it shows that the value of fcount > f table, it can be concluded that the fourth hypothesis is accepted, which means how to teach teachers (X1), Variable Online Learning Method (X2), Variable Student Perception (X3), have a joint or simultaneous effect on Student Achievement (Y) to teachers at UPT SMP Negeri Medan City.

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