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Students' Responses in Online Learning During the Covid-19 Pandemic Towards Mathematics Learning Outcomes of Students

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ABSTRAK

Tujuan penelitian ini adalah untuk mengetahui pengaruh respon siswa dalam pembelajaran daring dimasa pandemi *Covid-19* terhadap hasil belajar matematika siswa kelas IX pada tingkat SMP dan sederajat di Kota Baubau. Penelitian ini merupakan penelitian *ex-post facto*, yang dilakukan di SMP dan sederajat di Kota Baubau. Populasi adalah seluruh siswa kelas IX SMP dan sederajat di Kota Baubau (yaitu tingkat SMP dan MTs baik Negeri dan Swasta) sebanyak 3170 orang siswa. Sampel penelitian diambil sebanyak 314 orang siswa. Instrumen yang digunakan berupa kuesioner dan tes hasil belajar matematika siswa. Hasil analisis pada uji regresi dengan nilai signifikan sebesar 0,024 > 0,025 dan nilai t sebesar 2,266 menyatakan bahwa ada pengaruh respon siswa dalam pembelajaran daring terhadap hasil belajar matematika siswa kelas IX SMP dan sederajat di Kota Baubau.
Kata Kunci: respon siswa, pembelajaran daring, pandemic *Covid-19*, hasil belajar matematika

ABSTRACT

The purpose of this study was to determine the effect of student responses in online learning during the Covid-19 pandemic on the mathematics learning outcomes of grade IX students at the junior high school level and the equivalent in Baubau City. This research is an ex-post facto research, which was conducted in junior high school and equivalent in Baubau City. The population is all students of class IX SMP and equivalent in Baubau City (that is, SMP and MTs both public and private) as many by as 3170 students. The research sample was taken as many as 314 students. The instruments used are questionnaires and tests of students' mathematics learning outcomes. The results of the analysis on the regression test with a significant value of 0.024 > 0.025 and a t-value of 2.266 state that there is an effect of student responses in online learning on the mathematics learning outcomes of grade IX junior high school students and the equivalent in Baubau City.
Keywords*: student response, online learning, the covid-19 pandemic, mathematics learning outcomes*

1. BACKGROUND

Education plays an important role in improving the quality of human resources. Education is a fundamental phenomenon in human life, where there is life there must be education. Education is a conscious and planned effort to guide human to develop physical and mental potential at the cognitive, affective, and psychomotor levels so that changes in human behavior are carried out in a complete personality. Therefore, education must be aware of the learning process that must also be planned. So that everything that is done by teachers and students is a learning process to achieve the goals that have been set. According to John Dewey (Yatimah, 2017, p. 1) Education is a restructuring or reorganizing of experience that gives meaning to experience and increases its ability to guide subsequent experiences. Meanwhile, according to John S. Brubacher (Yatimah, 2017, p. 1). Education is a process in which human potential, abilities, and capacities that are easily influenced by habits are perfected with good habits, with tools (media) that are arranged in such a way and used by humans to help others or themselves in achieving goals. which has been set.

Study and learning are two things that are closely related and cannot be separated in educational activities. Study and learning is referred to as a form of Education that creates interaction between teachers and students. Teaching and learning activities carried out in this case are aimed at achieving certain goals that have been set before the activity is carried out. The teacher deliberately and systematically plans teaching activities, using everything for the benefit of his own teaching. Organizing learning is one of the main tasks of teachers that learning can be interpreted as an activity aimed at teaching students Dimyati and Mudjiono, in (M. Sulistyorini & Fathurrohman, 2012, p. 7) Learning can be done with various wayls, one of which is the distance learning. According to (Hamzah B. Uno, 2011, p. 34) Distance learning is where teaching activities are carried out separately from learning activities.

Distance learning is carried out by means of online learning, using web based distance education applications carried out by teachers and students almost all over the world as it is today. Online learning activities in Indonesia was used to handle education problem during pandemic condition. It started at the end of 2019 the world was hit by the Covid-19 pandemic. The global Covid-19 pandemic has affected many fields, including the education sector in Indonesia. The impact of the Covid-19 pandemic has changed the world of education, including learning methods. Distance learning from home using learning methods online is the only option to reduce the spread and transmission of Covid-19.

Based on the results of a survey conducted by the Institute of Social Economic Digital (ISED) in (Rahmawaty, 2020, p. 7) online learning is carried out with several approaches, namely: 1) virtual face-to-face, 2) online learning applications, 3) social media 4) assignments end. The use of technology that supports learning requires optimizing collaboration between teachers and students to overcome existing limitations. Besides that, it also requires knowledge about the use of technology and understanding of the vision and mission that will determine the success implementation learning online The success of online learning itself is also marked by good learning outcomes. Good learning outcomes can be achieved by carrying out maximum learning activities by students in the teaching and learning process. Therefore, students are the most decisive component of learning success. Complete and as good as any other components, without the support of the students, it is difficult to expect optimal learning outcomes

(Darmansyah, 2012, p. 10). Therefore, the student component in the learning system must get the attention of the teacher with maximum student learning activities. This can be indicated by positive student responses in responding to learning.

Furthermore, based on the results of the ISED survey in (Rahmawaty, 2020, p. 9) states that *WhatsApp*, *Google Classroom,* and *Zoom* are the most popular applications used during online learning during the Covid-19 pandemic. Similar applications are also used by teachers and students of class IX SMP and equivalent in the city of Baubau, in carrying out mathematics learning with online learning methods. By using these various applications, it is hoped that the success of learning mathematics by teachers using learning methods online

However, the reality is that this expectation is not fully achieved, this is in accordance with what SMP and equivalent teachers in the city of Baubau have conveyed to researchers, that during online learning, student learning outcomes are not as good as learning in the pre-covid-19 pandemic, student learning activity is also be the cause of less successful learning outcomes. This was also conveyed by the teachers, which then had an impact on the low ability of school delegates to work on math problems.

Based on the observations of researchers in several junior high schools and MTs in Baubau City, there are several factors that cause not optimally to study mathematics class IX students in mathematics, namely the limited supporting facilities such as cellphones, laptops, computers and internet networks which ultimately affect the success of online learning. In addition, learning activities that are less than optimal are believed due the response of students who think that online learning during the Covid-19 pandemic is no better than offline learning before the Covid-19 pandemic. Some students are less active during the learning activities. This shows that students are less interested in learning activities during the Covid-19 pandemic. Generally, students who respond positively to learning will be happy and interested in participating in the learning process. On the other hand, if the student's response is negative towards learning, it will result in students not being happy and not interested in participating in learning properly, so this will affect student learning outcomes.

In connection with the description above, it can be seen that there is an effect of students' responses in online learning during the Covid-19 pandemic on students' mathematics learning outcomes, but scientific evidence is needed. Because at this time the learning process during the Covid-19 pandemic is carried out using online learning methods, without good learning outcomes, the learning will not take place effectively. The learning process is said to be effective if all students are actively involved, both mentally, physically, and socially (E. Mulyasa, 2005) in (M. Sulistyorini & Fathurrohman, 2012, p. 27). The effect of student responses in online learning during the Covid-19 pandemic on the mathematics learning outcomes of class IX students at the junior high school level and the equivalent in Baubau City.

The formulation of the problem in this study is whether there is an effect of students' response in online learning during the Covid-19 pandemic on the mathematics learning outcomes of class IX students at the junior high school level and the equivalent in Baubau City?. Based on the formulation of the problem, the purpose of this study was to determine the effect of student responses in online learning during the Covid-19 pandemic on the mathematics learning outcomes of grade IX students at the junior high school level and the equivalent in Baubau City.

Response can mean answer, reply, or reaction. According to the theory of JB Waston (Suryabrata, 2002, p. 268) response is an objective reaction of the individual to the situation as a stimulant which can take various forms such as the patellar reflex, hitting the ball, taking food, closing the door and so on. In Partanto & Al-Barry (1994: 467) response means a reaction, an answer or a back reaction. Meanwhile, the Big Indonesian Dictionary states that the response is an answer to a symptom or event that occurs. Response is one of the psychological functions that can be obtained by individuals after the observation is completed (Baharuddin, 2009, p. 104). Responses can arise from the presence of support and resistance. Support will cause pleasure, while obstacles will cause displeasure. The tendency to feel happy or unhappy will provoke the strength of the will (Soemanto, 2006, p. 26). Feelings of pleasure or displeasure indicate that the response consists of positive and negative responses (Kusuma & Aisyah, 2012, p. 49).

From the explanation above, it can be concluded that the response of students in online learning during the Covid-19 pandemic is the reaction of students after implementation learning during the Covid-19 pandemic (happy) and negative responses (not happy). This can be measured by interest, perceived benefits, obstacles faced and student expectations regarding the implementation of online learning during the Covid-19 pandemic. This is also in accordance with research conducted by (Hadi, 2020, p. 59) that related to the enjoyment of online learning, 25 (26.32%) respondents stated that they enjoyed learning online, on the contrary, 70 (73.69%) respondents stated that they were not happy with online learning.

E-learning, according to Allan J. Hendersor in (M. Sulistyorini & Fathurrohman, 2012, pp. 283–284) is distance learning that uses computer technology, or usually the Internet. Henderson also added that e-learning allows learners to learn via computers in their respective places without having to physically go to class. According to William Horton in (M. Sulistyorini & Fathurrohman, 2012, p. 284) explains that e-learning is a web-based learning that can be accessed from the internet.

As a result of the Covid-19 pandemic, various policies have been implemented to break the chain spread of virus Covid-19 in Indonesia. One of them is implementing the Work From Home (WFH) policy. This policy is an effort that is applied to the community so that they can do all work from home. Education in Indonesia is also one of sectors the affected by the Covid-19 pandemic.

Due to interaction restrictions , the Ministry of Education of the Republic of Indonesia has issued a policy to close schools and replace the teaching and learning process by using a remote model in the network (online) (Siahaan, 2020, p. 2).

According to (Slameto, 2010, p. 2) Learning is a business process carried out by a person to obtain a new change in behavior as a whole, as a result of his own experience in interaction with his environment. Basically learning is a process that ends in change (Fathurrohman & Chotimah, 2018, p. 13). This is in line with what was stated by Slavin (2005) in (Fathurrohman & Chotimah, 2018, p. 13) that learning is a relatively permanent change in behavior or potential behavior as a result of experience or reinforced practice. Learning is due to the interaction between stimulus and response. A person is considered to have learned something if he can show a change in his behavior (Fathurrohman & Chotimah, 2018, p. 13). Therefore, according to (M. Sulistyorini & Fathurrohman, 2012, p. 8) a person is said to be learning if it can be assumed in that person that it becomes an activity process that results in a change in behavior.

One sign that someone has learned something is a change in behavior in him. These behavioral changes involve both changes in knowledge (cognitive) and skills (psychomotor) as well as those concerning values and attitudes (affective).

Changes throughout process learning can be expressed in various forms, such as changes in knowledge, understanding, acceptance, and other individual aspects. The success of learning can be seen from changes in students as a result of the learning process. Student learning outcomes can be measured through learning outcomes tests. Soemanto in (Yatimah, 2017, p. 9) suggests that the achievement of learning goals for learning citizens is called learning outcomes, the results of which can be measured through learning outcomes tests. In line with that in (Yatimah, 2017, p. 9) Jumroh also stated that learning outcomes are students' mastery of the knowledge, skills and attitudes of learning citizens. The success of learning can be seen from the changes in students as a result of the learning process brought by the teacher, for example in mathematics. Learning mathematics must be continuous and continuous. Previous experience and knowledge are requirements that must be known and will have an effect in learning further mathematical concepts.

Therefore, in learning mathematics, it must be consistent. Considering that mathematics is a science that has abstract objects of study where these objects are objects of thought including facts, concepts, operations or relations and principles. So to learn mathematics requires thinking activities. In addition, mathematics requires good calculation and analytical power. That is why it is necessary to have a teaching method or method that can help students learn mathematics more easily so that students can achieve good learning outcomes. Based on the description above, this study aims to see the effect of student responses in online learning during the Covid-19 pandemic on the mathematics learning outcomes of grade IX students at the junior high school level and the equivalent in Baubau City.

2. METHOD

The type of research used in this research is quantitative research with ex-post facto, which is to find the causes that allow changes in behavior, symptoms or phenomena caused by an event, behavior or things that cause changes in the independent variables as a whole. has occurred and explains or discovers how the variables in the study are related or have an effect. Research ex-post facto was used because in this study, the researcher did not give treatment to the variables studied. In this research, the independent variable and the dependent variable have been stated explicitly, to then be linked as a correlation study or predicted if the independent variable has a certain effect on the dependent variable.

This study uses a causal research design type. This study uses a one-way test, namely, it is suspected that variable X (students' responses in online learning during the covid-19 pandemic) has an influence on variable Y (students' mathematics learning outcomes).

This research was conducted in the odd semester of the 2021/2022 academic year in all junior high schools and the equivalent in Baubau city, Southeast Sulawesi Province, Indonesia. The population in this study were all students of class IX SMP and the equivalent in Baubau City (ie the level of SMP and MTs both public and private) as many as 3170 students. The research sample was taken based on the table for determining the number of samples with an error rate of 5%, namely 314 students.

The instrument used in this study was a questionnaire for student responses in online learning during the Covid-19 pandemic and a test for student mathematics learning outcomes. The validity of the instrument is the accuracy of the instrument to measure what is to be measured through a test item (Mary J. Allen & Yen, 1979, p. 95). According to (Propham, 1995, p. 43) there are three categories of validity, namely content validity, criterion-related validity and construct validity. In this study, the validity used is content validity and construct validity. The validation of the instrument content will be adjusted to the competency standards and basic competencies in the applicable curriculum (Azis & Dewangga, 2020, p. 5).

Reliability which has the origin of the words rely and ability. Measurements that have high reliability are referred to as reliable measurements. Reliability has other terms or names such as trustworthiness, reliability, constancy, stability, consistency Azwar, 2011 in (Rusydi Ananda, 2018, p. 122) Based on the meaning of the word, a reliable instrument is an instrument whose measurement results can be trusted.

Reliability is expressed by the reliability coefficient which is in the range 0 to 1. The higher the reliability coefficient that is close to 1, the higher the reliability, and conversely the lower the reliability coefficient which is close to 0, the lower the reliability (Azwar, 2012, p. 83). Because the instrument uses a Likert scale with interval data, the appropriate reliability test is to use the Alpha (Ebel, R.L., & Frisbie, 1986, p. 79). coefficient Croanbach alpha in a minimum measuring instrument is 0.6 - 0.8 (Sufren, 2013, p. 55). In this study, to facilitate the reliability analysis, it was carried out with the help of SPSS. The results of the instrument reliability analysis can be seen in Table 1.

Table 1. Reliability Test Result

Cronbach's Alpha	N of Items
.809	28

The data that has been collected by the researcher is then analyzed in accordance with the provisions and wishes of this study so that it can be read and can be interpreted as research results. This is in line with the opinion of (Azwar, 2010, p. 123) that the management of research data that has been obtained is intended as a way of organizing data in such a way that it can be read and interpreted. The data analysis techniques in this study consisted of 3 types of statistical analysis, namely descriptive analysis, inferential analysis, and hypothesis testing.

3. RESULTS AND DISCUSSION

3.1. Research Results

Data for this study were obtained from grade IX junior high school students and the equivalent in Baubau city for the 2021/2022 academic year. There are 3170 students in grade IX SMP and equivalent in Baubau City. Because the subject in this study amounted to 3170 students, then based on the sample table in (Sugiyono, 2014), the number of samples taken was a minimum of 314 students. The research results from the sample were analyzed descriptively and inferentially.

The calculation of the descriptive analysis of student responses in online learning can be seen in the results of the analysis using SPSS, in Table 2 below.

Table 2. Descriptive Student Responses in Online Learning and Learning Outcomes

		Student Responses in Online	**Learning Student Mathematics Learning Outcomes**
N	Valid	316	316
	Missing	0	0
Mean		97.2342	63.4557
Median		96.0000	73.0000
Mode		92.00	75.00
Std . Deviation		13,35197	20,85326
Minimum		55.00	10.00
Maximum		135.00	100.00
Sum		30726.00	20052.00

Based on the results of calculations using SPSS assistance, data is obtained as in Table 2 that the student response in online learning is the average value the average is 97.2342, the minimum value is 55, the maximum value is 135, the median is 96.00, the mode is 92, and the standard deviation is 13.35197. Meanwhile, the students' mathematics learning outcomes have an average score of 63.4557, a minimum score of 10, a maximum score of 100, a median of 73, a mode of 75, and a standard deviation of 20.85326.

The categories of student response questionnaire scores in online learning are shown in Table 3 below.

Table 3. Categories of Student Response Questionnaire Scores in Online Learning

		Frequency	**Percent**
Valid	Low	31	9.81
	Medium	233	73.73
	High	52	16.46
	Total	316	100.00

Based on Table 3 above, it can be concluded that the average student response in online learning in medium category because it is seen from the frequency value of 233 with moderate criteria.

The categories of scores for students' mathematics learning outcomes in online learning are shown in Table 4 below:

Table 4. Category Score Student Mathematics Learning Outcomes in Online Learning

		Frequency	**Percent**
Valid	Low	39	12.34
	Medium	109	34.49
	High	168	53.17
	Total	316	100.00

Based on Table 4 above, it can be concluded that the average student learning outcomes in learning online in the high category because it is seen from the frequency value of 168 with high criteria.

Inferential analysis is intended to test the research hypothesis, but before testing the hypothesis, several analytical requirements are tested, namely normality test, linearity test, autocorrelation test, and heterooxidation test. To test the normality of the data, the researcher used the Kolmogorov-Smirnov Test with a significant level (α) = 5%. This test is performed

using SPSS, the data is normally distributed if the significant value is > (α) = 5%. Based on calculations using the Kolmogorov-Smirnov Test, the results of the normality test can be seen in Table 5 below.

Table 5. Normality Test

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		316
Normal Parameters[a,b]	Mean	0.0000000
	Std. Deviation	20.68481038
Most Extreme Differences	Absolute	0.176
	Positive	-0.176
	Negative	0.089
Test Statistic		0.176
Asymp. Sig. (2-tailed)		0.000[c]

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.

Based on the results of the SPSS output in Table 5, a significant value is obtained asyimp. sig (2-tailed) of 0.000 < 0.00, then according to the basis for decision making in the Kolmogorov-Smirnov Test above, it can be concluded that the data are not normally distributed. However, based on the empirical experience of several statisticians, the number of data is more than 30 numbers (n > 30), then it is assumed to be normally distributed and can be said to be a large sample.

To test linearity using SPSS, with a significant level (α) = 5%. The data has linearly significant data between the independent variable and the dependent variable if the significant value is > (α) = 5%.test, linearity be seen in Table 6 below.

Table 6. Test Linearity Instruments

ANOVA							
			Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
Student Mathematics Learning Outcomes * Student Responses in Online Learning	Between Groups	(Combined)	26347.695	59	446.571	1.033	0.419
		Linearity	2204.045	1	2204.045	5.100	0.025
		Deviation from Linearity	24143.650	58	416.270	0.963	0.555
	Within Groups		110632.685	256	432.159		
	Total		136980.380	315			

Based on Table 6, the significant value (*Sig*) of Deviation from Linearity is 0.555 greater than 0.05. it can be concluded that there is a significant linear relationship between the variables between students' response variables in online learning (X) and students' mathematics learning outcomes (Y). To test autocorrelation, researchers used the Durbin-Watson with a significant level (α) = 5%. This test was carried out with the help of SPSS, as shown in Table 7 below.

Table 7. Test Autocorrelation

Model Summary[b]					
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**	**Durbin-Watson**
1	0.127[a]	0.016	0.013	20.71772	0.766

a. Predictors: (Constant), Student Response in Online Learning
b. Dependent Variable: Students' Mathematics Learning Outcomes

It is known that the final sample is 316 and K (Independent Variable) = 1. Obtained the value of DL = 1.80912, DU = 1.82182, and the value of 4 DU = 2.17818 can be seen in the Durbin Watson table. Based on the results of SPSS output in Table 7, that the Durbin-Watson value after using the Durbin's Two Step Method healing method with Durbin Watson d (DW) of 0.766 concluded that there was no autocorrelation or the assumption of autocorrelation was at a value of 0 < DW < DL (0 < 0.766 < 1.80912). This shows that students' responses in online learning to students' mathematics learning outcomes have no effect at the junior high school level and the equivalent in Baubau City, where the researchers conducted research in the current period. However, it is not necessarily in the next study that there is no effect because there are no symptoms of autocorrelation.

To test heterogeneity of the data, the researcher used the Park which was carried out with the help of SPSS. Test Park shown in Table 8 below.

Table 8. Test Heterooxidation

Coefficients[a]						
		Unstandardized Coefficients		Standardized Coefficients		
Model		**B**	**Std. Error**	**Beta**	**t**	**Sig.**
1	(Constant)	2.844	2.975		0.956	0.340
	Lnx	0.506	0.651	0.044	0.777	0.438
a. Dependent Variable: Lnei2						

Based on Table 8, obtained a significant value from the Park of 0.438 > 0.05 so it can be concluded that there is no heterooxidation symptom.

The hypothesis in this study is that there is an effect of student responses in online learning during the Covid-19 pandemic on the mathematics learning outcomes of grade IX students at the junior high school level and the equivalent in Baubau City.

$$H_0 : \beta = 0 \quad \text{vs} \quad H_1 : \beta \neq 0$$

Where:

H_0 =there is no effect of student responses to online learning during the Covid-19 pandemic on mathematics learning outcomes for grade IX junior high school students and the equivalent in Baubau city.

H_1 =there is an effect of student responses to online learning during the Covid-19 pandemic on the mathematics learning outcomes of grade IX junior high school students and the equivalent in Baubau city.

Hypothesis testing using programming SPSS Testing is done once for each hypothesis proposed. Decision returns on hypothesis testing by looking at the significance value of the t-test results presented by the SPSS program are shown in Table 9 below.

Table 9. Correlation

Model Summary				
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	0.127[a]	0.016	0.013	20.71772
a. Predictors: (Constant), Student Responses in Online Learning				

Based on the results of SPSS output from Table 9 , it is known that the correlation or relationship value (R) is 0.127, and the coefficient of determination (R Square) is 0.016, which means that the influence of student responses in online learning (X) on students' mathematics learning outcomes (Y) of 1.6% while 98.4% of students' mathematics learning outcomes are influenced by other variables not examined.

Table 10. ANOVA

ANOVA[a]						
Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	Regression	2204.045	1	2204.045	5.135	0.024[b]
	Residual	134776.335	314	429.224		
	Total	136980.380	315			

a. Dependent Variable: Student Mathematics Learning Outcomes
b. Predictors: (Constant), Student Responses in Online Learning

Based on the results of the SPSS output in the table above, it is known that the calculated F value is 5.135 with a significant value obtained is 0.024 <0.05, which means that H_0 rejected. In other words, there is an effect of student responses in online learning during the Covid-19 pandemic on the mathematics learning outcomes of class IX students at the junior high school level and the equivalent in Baubau City.

Table 11. Hypothesis of Student Responses in Online Learning and Student Mathematics Learning Outcomes

Coefficients[a]						
		Unstandardized Coefficients		**Standardized Coefficients**		
Model		**B**	**Std. Error**	**Beta**	**t**	**Sig.**
1	(Constant)	44.192	8.580		5.150	0.000
	Student Response in Online Learning	0.198	0.087	0.127	2.266	0.024

a. Dependent Variable: Student Mathematics Learning Outcomes

In Table 11 above the constant value is 44.192, this number is a constant number which means that if there is no student response in online learning (X) then the value of student mathematics learning outcomes (Y) is 44.192. The student response value is 0.198. This figure means that for every 1% change in the student response rate, learning outcomes (Y) will increase by 0.198 assuming the other variables are constant. Thus, it can be said that students' responses in online learning (X) affect students' mathematics learning outcomes (Y). So the regression equation is $Y = 44.192+1.098X$. In the results of the analysis on the t-test with a significant value of 0.024 <0.05 and a t-value of 2.266, it states that there is an effect of student response in online learning during the Covid-19 pandemic on mathematics learning outcomes. grade IX students at the junior high school level and the equivalent in Baubau City. With the meaning of the equation is meaningful.

3.2. Discussion

Based on the descriptive analysis, it was concluded that the average student response in online learning was in the medium category and the average student learning achievement in online learning was in the high category. Based on the results of the SPSS output on the hypothesis test, it is known that the correlation or relationship value (R) is 0.127, and the coefficient of determination (R Square) is 0.016, which means that the effect of student

responses in online learning (X) on students' mathematics learning outcomes (Y) is 1.6% while 98.4% learning outcomes are influenced by other variables not examined. While in the ANOVA table, it is known that the calculated F value is 5.135 with a significant value obtained is 0.024 <0.05, which means that H_0 rejected. In other words, there is an effect of student responses in online learning during the Covid-19 pandemic on the mathematics learning outcomes of class IX students at the junior high school level and the equivalent in Baubau City.

The table above also shows a constant value of 44,192, this number is a constant number which means that if there is no student response in online learning (X) then the value of students' mathematics learning outcomes (Y) is 44,192. The student response value is 0.198. This figure means that for every 1% change in the student's response rate, the student's mathematics learning outcomes (Y) will increase by 0.198 assuming the other variables are fixed. Thus, it can be said that students' responses in online learning (X) have an effect on students' mathematics learning outcomes (Y). So that the regression equation is $Y = 44{,}192+0{,}198X$. The regression coefficient is positive so it can be stated that there is an effect of student responses in online learning on students' mathematics learning outcomes.

Like the research conducted in (Erviana, 2016), about interest in learning, attitudes, and students' perceptions about how to teach teachers to mathematics learning outcomes, the results obtained are getting a positive response. Students' perceptions of how to teach teachers have a positive and significant indirect effect through attitudes towards mathematics lessons on students' mathematics learning outcomes. Furthermore, in the research of (Andriani et al., 2021), regarding student responses to online learning in mathematics subjects with the results obtained, namely getting a positive response. The average percentage of student responses with indicators including interest, motivation, satisfaction, interest and student responses about online learning has a positive response.

However, what was obtained in this study was the t-test analysis results with a significant value of 0.024 < 0.05 and a t-value of 2.266 stating that there was an effect of student response in online learning during the Covid-19 pandemic on the mathematics learning outcomes of class IX students at the junior high school level. and the equivalent in Baubau City. With the meaning of the equation is meaningful.

The results of this study are not in accordance with what the researchers expected, namely H_1 is accepted or there is an influence of student responses to online learning on the learning outcomes of class IX students of SMP Negeri 2 Baubau. According to the researcher this is caused by: 1). The lack of interest in student learning is evidenced by the dominance of the results of student learning tests which are low and do not reach the KKM standard, most students do not understand how to solve the math problems they face. 2) the limited way of teaching teachers so that there is less interaction between teachers and students which has an impact on the level of understanding and success of student learning.

4. CONCLUSION

Based on the results of the analysis that has been carried out, it can be concluded that there is an effect of student responses in online learning during the Covid-19 pandemic on the mathematics learning outcomes of class IX students at the junior high school level and the equivalent in Baubau City.

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