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COMPARISON OF SCIENCE LEARNING RESULTS USED E-LEARNING AND ZOOM APPLICATIONS IN DISTANCE LEARNING AT SMP N 9 AMBON

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ABSTRACT

The development of information and communication technology at this time is very rapid. This can be seen from the increasingly sophisticated communication and information tools such as mobile phones and computers. Mobile phones that used to only feature telephones, now they are very developed to the point of 4G technology that can speed up the flow of delivery. In help students in the learning process of SMP N 9 AMBON, they use 2 applications, namely the E-Learning application and the Zoom application. This study uses quantitative and qualitative descriptive analysis techniques. Data about the observations were analyzed qualitatively. Student learning outcomes data were analyzed quantitatively by calculating the average score, standard deviation, median, highest score, and lowest score, this study also used inferential analysis techniques used to test research hypotheses. Based on the results of research and data analysis, for students who were given the treatment of learning models using the Zoom application, the results obtained were the average value of 47.5 out of a maximum score of 100. Based on the results of research and data analysis, for students who were given the treatment of learning models using the E-Learning application, the results obtained were the average value of 45.71 from a maximum score of 100.

Keywords: *e-leraning, zoom, science.*

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INTRODUCTION

The development of information and communication technology is currently very rapid. This can be seen from the increasingly sophisticated communication and information tools such as mobile phones and computers. From mobile phones that previously only had features for telephones, now it has developed so much that there is 4G technology which can speed up the flow of information delivery at a more efficient cost and time. Apart from technological developments, computers have also made a lot of progress. Computers that previously could only process data can now also be used to transfer information and communicate using the internet. Technological developments that occur in this era of globalization have had a huge impact on existing domains of life such as the social, cultural, economic and educational domains. In essence, education is a conscious effort made to produce quality human resources that are in line with the demands of the times. Education plays a very important role in the formation of humans who can adapt to the environment and can be sensitive to the upheavals of existing social changes. In an effort to improve the quality of education, schools must be able to mobilize all components that are subsystems

in an education quality system. According to Kunandar (2012) The first and main subsystem in improving the quality of education is the teacher factor. From the opinion above, it can be concluded that whether the quality of education is good or bad is greatly influenced by the teacher. Therefore, teachers are required to be professional, creative and innovative in improving the quality of education and awakening students' scientific attitudes.

Teachers in this era of globalization are required to master existing technological developments. It is hoped that mastering these technological developments will later enable educators to apply them in the realm of education. By being able to master technological developments, teachers will be able to develop quality teaching and learning processes in order to improve better learning outcomes. Basically, education is a process of conveying information to students where in the information there is a message to be conveyed. This information can be conveyed using learning media. In the implementation of learning. In this era of very rapid technological progress, there are many media that can be used to support learning, there are print media, electronic media and media that have been developed to make learning easier. With a touch of existing information and communication technology, the concept of E-Learning has been born. E-Learning is a learning model that has the characteristics of being able to be used by anyone (everyone), anywhere (everywhere), and at any time (everytime). E-Learning focuses on the efficiency of the teaching and learning process. Using the Elearning learning model will make it easier for students to access learning materials, discuss with friends, and ask questions to teachers anytime and anywhere. Not only that, teachers can also add references to teaching materials that can be uploaded on the internet so that students can also broaden their knowledge, and this will make it very easy for teachers to supervise students' mastery of the material. In helping students in the learning process, SMP N 9 AMBON uses 2 applications, namely the E-Learning application and the Zoom application.

METHOD

The type of research used is experimental research Pre-Experimental Designs (nondesigns), it is said to be pre-experimental designs, because this design is not yet a real experiment. Because there are still external variables that influence the formation of the dependent variable. So the experimental results which are the dependent variable are not solely influenced by the independent variable. This can happen because there are no control variables, and the sample was not chosen randomly. The research design used in this research is Intact-Group Comparison, in this design there is one group used for research, but divided into two, namely half the group for the experiment (which was treated using the E-Learning application) and half for the group given the treatment using the Zoom application. The aim is to find out the differences in detail between the learning outcomes of students taught using the E-learning application and the Zoom application.

DISCUSSION RESULT

This research uses descriptive analysis to answer the problem formulation, namely student learning outcomes using the E-learning and Zoom applications at SMP N 9 AMBON. Meanwhile, inferential analysis is used to answer the problem formulation, namely the difference in student learning outcomes between the use of E-Learning and Zoom applications.

Table 1. Student Learning Results on Respiratory System Material in Humans by Applying Learning Using the Zoom Application for Class VIII Students of SMP N9 AMBON

Interval	**Frecuensi** (f_i)	**mean** (x_i)	$f_i.x_i$	$\bar{x}$	$x_i - \bar{x}$	$(x_i - \bar{x})^2$	$f_i(x_i - \bar{x})^2$
28-32	1	30	30		-20	400	400
33-37	0	0	0		0	0	0
38-42	3	40	120		-10	100	300
43-47	4	45	180		-5	25	100

48-52	2	50	100	50	0	0	0
53-57	2	55	110		5	25	50
58-62	1	60	60		10	100	100
63-67	1	65	65		15	225	225
Jublah	14		665		-5	850	1175

Table 2. Student Learning Results on Respiratory System Material in Humans by Applying Learning Using E-Learning Applications for Class VIII Students of SMP N9 AMBON

Interval	Frecuensi (fi)	Mean (xi)	$f_i x_i$	$\bar{x}$	$x_{i-\bar{x}}$	$(x_{i-\bar{x}})^2$	$f_{i(x_{i-\bar{x}})^2}$
28-32	1	30	30		-15	225	225
33-37	2	35	70		-10	100	200
38-42	3	40	120		-5	25	75
43-47	1	45	45	45	0	0	0
48-52	3	50	150		5	25	75
53-57	3	55	165		10	100	300
58-62	1	60	60		15	225	225
Jumblah	14		640		0	700	1100

Students who were given the learning model treatment using the Zoom application obtained results that were an average score of 47.5 out of a maximum score of 100. Meanwhile, for students who were given learning model treatment using the E-Learning application, the results obtained were an average score of 45.71 out of maximum score is 100. In learning using the E-Learning application, students' ability to think and solve problems independently is prioritized, whereas in learning using the Zoom application, students are given material directly by the subject teacher. If students do not understand the material, students can ask the teacher directly. During the evaluation stage with new and the same questions for each student who received learning with both applications, it turned out that the average score of students for the group who received learning with the Zoom application was higher, namely 47.5 and students who received learning with the E-Learning application 45.71 according to the author the reason learning with the Zoom application is higher is because learning with the E-Learning application prioritizes students' ability to think for themselves and solve their own problems without the help of a clearer understanding from a teacher while learning using The Zoom application is taught directly by the teacher or coordinated directly by the teacher if there is something the students don't understand in the learning material, so that

when there are new questions, the Zoom group students can easily solve the questions because they have mastered the basic concepts and have a deeper understanding. that material.

Based on the results of hypothesis testing with the t test, a value of 1.47 is obtained. When compared with the t table value which is 1.3, it can be stated that $t_0 > t\alpha = 1, 47 > 1,3$. From these results, it can be concluded that there are differences in science learning outcomes between learning using the E-learning application and the Zoom application for class VIII students at SMP N 9 AMBON, in other words the hypothesis in this research is accepted. Because the hypothesis discussed in the previous chapter as the basis for conducting this research proves that there are differences in learning outcomes because looking at the numbers, grades or scores obtained show differences. Although basically they both show low figures for achieving success levels in student learning outcomes.

CONCLUSION

1. Students' science learning outcomes by implementing learning using the Zoom application on the Human Respiratory System material are categorized as low. This is shown in the average score obtained of 1.47 and the Ministry of Education and Culture's guidelines regarding the category of student cognitive outcomes which shows that the largest percentage is shown in the low category, namely 75% of 14 students.
2. The results of students' science learning by implementing learning using E-learning applications on the Respiratory System in Humans material are categorized as low. This is shown in the average score obtained of 1.3 and the Ministry of Education and Culture's guidelines regarding the category of student cognitive outcomes which shows that the largest percentage is shown in the high category, namely 70% of 14 students.
3. Learning using the Zoom application is higher because by using the Zoom application in learning students get learning like face to face but virtual, therefore students get more understanding compared to students who get material using the E-Learning application because in this application students only receive teaching materials and are required to study on their own without any guidance from the subject teacher.

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