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The Influence of Schoology-Based Learning On Student Learning Outcomes in The Middle of the Covid-19 Pandemic

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Abstract

Currently, the teaching and learning process is carried out online in class X KIP D using conventional methods. To improve learning outcomes, Schoology-based E-learning is used. Schoology is a Learning Management System (LMS) that provides facilities for teachers and students to interact with each other, exchange information online. This research method uses Pre-experimental one group pretest-posttest used to determine the level of student ability before and after treatment is carried out. treatment. Regression analysis is used to find out how much influence the independent variable has on the increase in the dependent variable. The results of this study indicate that after carrying out the teaching and learning using Schoology-based E-learning increases student scores. With the average posttest value is higher than the pretest value with a difference of 40.89. From the results of the pretest value sig. 0.046 and the posttest value of sig. 0.000. The pretest and posttest values were below 0.05. The p-value obtained is 0.000, which means it is smaller than 0.05. The regression equation obtained is $Y = 8.889 + 1.123X$ and the p-value (Sig) is 0.000 which is below 5% alpha. This means that H₀ is rejected (there is no significant positive effect between Schoology-based E-learning on student learning outcomes), and accepts H₁ (there is a significant and positive effect between Schoology-based E-learning on student learning outcomes).

Keywords: E-learning, Schoology, Learning outcomes

Introduction

The whole world has been hit by the COVID-19 outbreak which has so freely influenced human activities, especially activities in the field of education, for this reason, the use of electronic media and the internet as a supporter of online learning is very necessary. This is important for prospective educators to be able to take advantage of e-Learning, especially schoology courses that are integrated with face-to-face meetings. Information and communication technology has become an important element in the world of education as a learning medium. Education is conscious and planned effort to create an atmosphere active learning and learning process in developing their potential to have religious spiritual strength, self-control, personality, intelligence, noble character, and skills needed by themselves, society, nation and state (Law number 20 of 2003). The current use of information technology can improve integrity and quality in processes learning, because with the use of technology can improve access, speed up the learning process, and reduce administration.

The learning process in the KIP D class, students must develop the ability to think creative, critical and packaged in a network lesson base. The basic network is the basic material that includes about the basic network on which to rely on beginners and should be learned in the network. Survey results what has been done shows that the learning process basic networking subjects are still considered difficult by some students, because in the basic network material students required to know how the network and count. Currently the teaching and learning process in the eye introductory lectures on education in the KIP D class are carried out with conventional methods. Conventional method Also known as the lecture method.

In conventional learning, students are more listen a lot to the teacher's explanation in front of the class and carry out the task if the teacher provides training questions to students. After the teacher gives questions then students are asked to practice the questions the. The method commonly used in conventional learning, including the lecture method, question and answer method, discussion method, and method assignment. According to Sinarno

Surakhmad in Suryobroto (2009) what is meant by lecture as a teaching method, namely lighting and oral narrative by the teacher for improvement his class. During the lecture, the teacher can using tools such as pictures, power slides point so that the description becomes clearer. Learning Resources used during the learning process refers to the module owned by the teacher, so that the learning process becomes boring.

The relatively large number of potential students reduce the quality of interaction between teacher and participants students, so that the results achieved are less than optimal. In the learning process, teachers are required to choose learning methods that can improve results student learning.

The use of computers in the learning process much needed, information and communication technology has three important roles in learning, namely: learning content, learning media and tools study. The learning module is one of the materials teaching used by students in the process learning. The learning module contains materials learning, methods and evaluation to help students achieve the expected competencies. In addition to the learning module, there are also presentation slides, video tutorials and games, so students don't feel bored during the teaching and learning process. One of utilization of the use of computers in the process learning is by using E-learning.

E-learning is a learning media that utilizing electronic media as a tool in the process of teaching and learning activities to improve student learning outcomes. E-learning can help teachers in teaching and learning activities, because E-learning can be used anytime even during class hours it's finished. E-learning can be used without having to face to face between teachers and students. So when the learning process takes place but there is problems, for example the teacher cannot attend because there is other activities have meetings/external services, students can still carry out the learning process, for example others, such as the lack of learning hours in students' schools can continue learning at home. School is one of several learning Management System (LMS) which provides facilities for teachers and students to interact with each other, exchange information online. As is Schoology is expected that students can download materials lessons, presentation slides, video tutorials, games, taking quizzes, exams, discussions, and collecting assignments given by the teacher. Schoology can also used via smartphones. Based on the description above, the researchers conducted research on the effect of -based e-learning Schoology on improving student learning outcomes.

Method

The research conducted is by using research method Pre-experimental one group pretest postets and regression analysis. Pre-experimental group pretest-posttest design is used to find out student's ability level before implementation treatment and after treatment. Analysis regression is used to find out how much the effect of the independent variable on the increase in the variable bound. The research design is a design how a research will be conducted, (Max, 2009:58). The design carried out in this study carried out in one group, the group under study will be given treatment by giving treatment. Before being given treatment by researchers, students first first do a pretest. Pretest is used for know the ability level of students before treatment is carried out. After the researcher gave treatment then the researcher gave a posttest. Aim posttest is to determine the level of ability students after the treatment. Treatment is done by giving students learning about -based E-learning media Schoology to find out the extent of learning outcomes. For more details about the research design one group pretest-posttest will be described as follows:

Table 1 Research Design One Group Pretest-Posttest

Pretest	Treatment	Posttest
O ₁	X	O ₂

Table 1 Research Design One Group Pretest-Posttest Information:

- O1 = Value before being treated (Pretest)
- X = Giving treatment
- O2 = Value after being treated (Posttest)

The data used in this study are qualitative data and quantitative data. These data were obtained from the results of assessments by material experts and learning resource experts, responses by lecturers who were influential in the course as learning practitioners, and responses obtained from the results of trials to PGSD students.

1. Qualitative data in the form of data described with the criteria of very good (SB), good (B), sufficient (C), less (K), very poor (SK) obtained from the assessment of material experts and learning resource experts by marking

check (√) on each criterion. Qualitative data is also in the form of response data from users which are described with the criteria of strongly agree (SS), agree (S), disagree (KS), disagree (TS), strongly disagree (STS) by placing a check mark (√) on each criterion.

- Quantitative data in the form of scores from the assessment of material experts and learning resource experts, namely SB = 5; B=4; C=3; K=2; SK=1 and the score from users' responses is SS=5; S=4; KS=3; TS=2; STS=1. The score is calculated from the average sum of each instrument resulting from the assessment of material experts and learning resource experts, as well as responses from users, namely lecturers and students as test subjects, which are then compared with the ideal score to determine the feasibility of learning resources.

Results and Discussion

In the research conducted with the title of the effect of Schoology-based E-learning on improving student learning outcomes, several discussions and presentations of the results of the research have been carried out. Schoology-based e-learning can be used by visiting the Schoology.com web site. Schoology can be used on all operating systems and smartphones. Schoology-based e-learning has uploaded content in the form of PDF, PPT (Power Point), video tutorials. The following is an overview of the Schoology-based e-learning media. The following is the procedure for using the Schoology application.

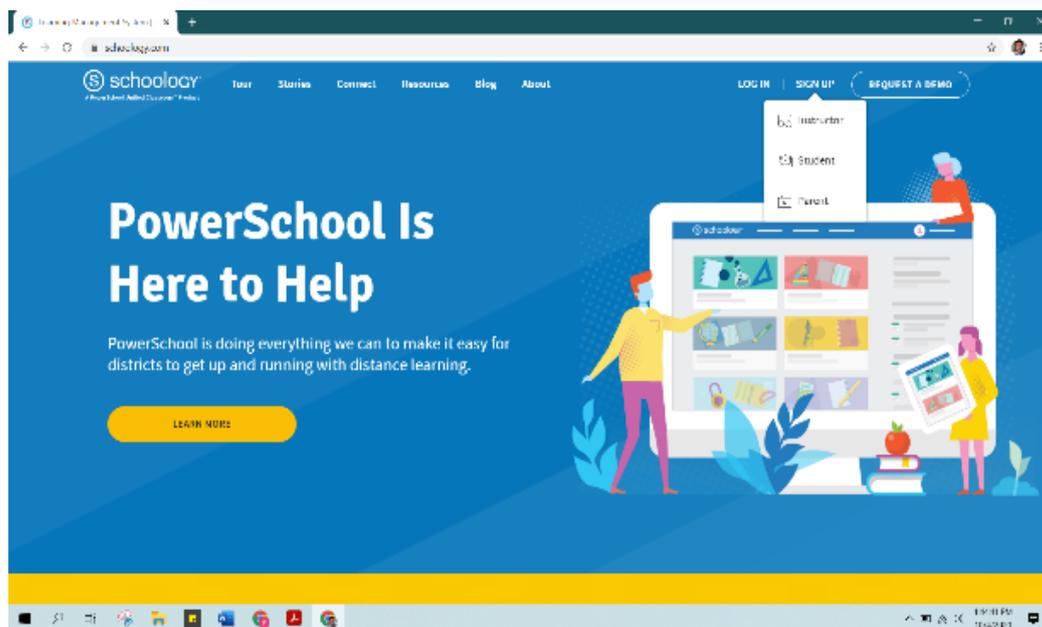


Figure 1 LMS Schoology Homepage

Sign Up Display on Learning Media Schoology. Then click Sign Up, it will the initial page appears in the form of choices for each user, click the teacher button to register as a teacher. Then enter your email, password and school data. For students, click on the student button. Then enter the access code that has been given by the teacher for the learning class he has created.

For learning outcomes, normality testing was carried out for the results of the pretest and posttest scores using Kolmogorof Smirnov. The results of the normality test of the pretest and posttest data can be seen in table 1 below.

Table 2. Normality test

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
posttest	,215	39	,000	,880	39	,001
pretest	,142	39	,046	,967	39	,295

Sumber data: Output SPSS 21

If the significance is below 0.05, it means that there is a significant difference, and if the significance is above 0.05, there is no significant difference. The application of the Kolmogorov Smirnov test is that if the significance

is below 0.05, it means that the data to be tested has a significant difference. From the results in table 4.23 the pretest value of sig. 0.046 and the posttest value of sig. 0.000. Pretest and posttest values below 0.05 mean that the data to be tested has a significant difference. Pretest Histogram

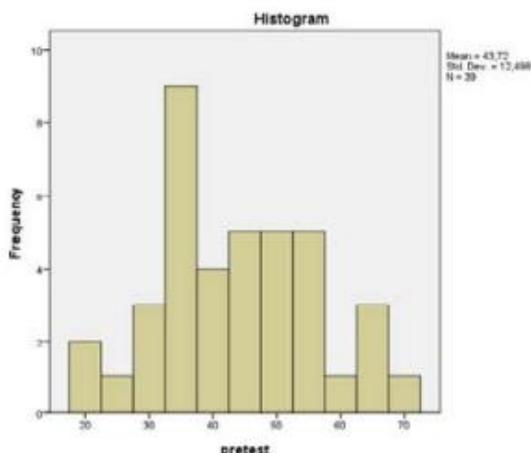


Figure 2. histogram Pretest

Figure 2 shows the results of the pretest analysis in the PGSD KIP D class which consists of 39 students. From the study results obtained results with details, namely, the lowest value is 20 and the highest value is 70. Histogram Posttest

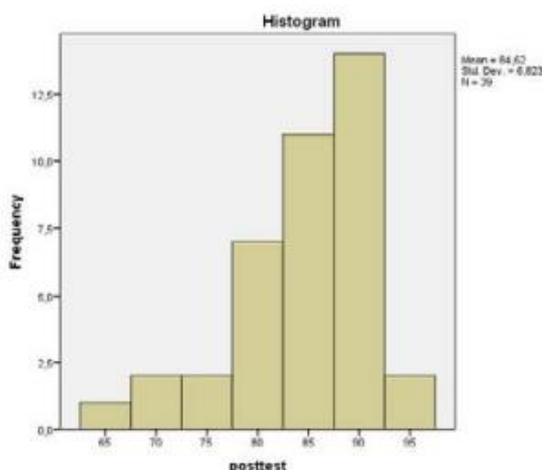


Figure 3. histogram Posttest

Figure 3 is the result of the posttest analysis in the PGSD KIP D class which consists of 39 students. From the study results obtained results with details, namely, the lowest score is 65 and the highest score is 95.

Table 2. Correlation Test Results Between E-learning Schoology variables (X) and learning outcomes variables (Y)

Correlations		
	X	Y
X	Pearson Correlation	1
	Sig. (2-tailed)	,000
	N	39
Y	Pearson Correlation	,881**
	Sig. (2-tailed)	,000
	N	39

** . Correlation is significant at the 0.01 level (2-tailed).

Data source: SPSS 21 output

Table 2. The correlation coefficient test (R) between the E-learning variable based on Schoology (X) and the learning outcome variable (Y) is 88.1%. This shows that there is a strong relationship between the two variables, because 88.1% are in the condition $0.75 < r < 0.90$ (strong correlation).

Table 3. Determination Test Results Between the E-learning Schoology variable (X) and the learning outcome variable (Y)

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.881 ^a	.776	.770	4,345	2,360

Data source: SPSS 21 output

Table 3 explains the magnitude of the correlation/relationship (R) value. When viewed from the R-Square value which is 77.6% and explains the percentage of influence of the independent variable on the dependent variable called the coefficient of determination which is the square of R. That is, the effect of Schoology-based E-learning on student learning outcomes is 77.6% while the remaining 22.4% (100%-77.6%) is influenced by other variables that are not in the linear regression model.

Conclusion

The learning outcomes of KIP D class students before using Schoology-based E-learning (pretest) were better than learning outcomes after Schoology-based E-learning (posttest). This can be seen from the average pretest score is 43.72 with a standard deviation of 12,498, while the average posttest value in the KIP D class is 84.62 with a standard deviation of 8.00. The average results of the pretest and posttest scores showed that the average posttest scores were higher than the pretest scores with a difference of 40.89. and the P-value obtained is 0.000 which means it is smaller than 0.05. The results of the empirical test show that the percentage of the influence of the independent variable on the dependent variable is 77.6%. The results of the t-test show the t-count value of 11.333 and the p-value (Sig) of 0.000 which is below the 5% alpha. This means that "there is a significant and positive influence between Schoology-based E-learning on student learning outcomes". It was concluded that based on testing 39 respondents of KIP D class students at PGSD UST proved that Schoology-based E-learning had a positive effect on student learning outcomes indicated by a P value of 0.000 which was smaller than 5% significance, so that in the end, Schoology-based E-learning had a positive effect. which is significant to student learning outcomes. Suggestions The results of the research that has been done there are still many shortcomings, especially in teaching materials, it is hoped that for future research other parties who continue this research will focus more on the material being taught so that students are more interested in using E-learning and can take advantage of the sophistication of technological developments in this era of globalization.

Recommendations

The results of the research that has been carried out are still there many shortcomings, especially in teaching materials, it is hoped for future research, other parties who continue this research to focus more on the material taught so that students are more interested in using e-learning and can take advantage of sophistication technological developments in this era of globalization.

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