The Effect of The Role Playing Model on Student Learning Outcomes of SMP Negeri 2 Wundulako

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Abstract

The learning process in class still uses a lot of methods conventional and is less creative in conveying material, namely the model has not been applied one of the innovative learning models is the STAD learning model. The research purpose is to determine the effect of the STAD cooperative learning model on student learning outcomes of SMP Negeri 2 Wundulako. This type of research is quasi-experimental. This research was quantitative. The population in this research were all students of class VIII SMP Negeri 2 Wundulako, amounting to 56 people. The sampling of this research used the purposive sampling technique with certain considerations that each class has the same initial cognitive ability. As the experimental unit, there were two research classes, namely one experimental class and one control class, each of which was 28 people. The data was collected using non-test techniques, observation sheets for student learning activities, and tests in the form of multiple-choice pretest-posttest questions. Then analyzed by descriptive statistic analysis and inferential static analysis. The results of the research inferentially on student learning outcomes using the Independent sample t-test at the significance level = 0.05, obtained t count 8.799 and t table 1.674 because t count ≥ t table, indicating that H0 was rejected and H1 was accepted. It could be concluded that the application of the role-playing model to the digestive system material affected the learning outcomes of class VIII students of SMP Negeri 2 Wundulako.

Keywords: Role playing model, Student learning outcomes.

A. Introduction

Biology is one of the subjects that can be integrated with the ability to think. this is stated in the attachment to the Minister of National Education number 22 the year 2006 that the subject group of science and technology intended to cultivate thinking scientifically, actively, creatively and independently (Depdiknas, 2006). Biology is the science that studies living things that live and interact with their environment. As part of poses science Biology learning should ideally empower aspects of knowledge, skills and the formation of a scientific attitude. Teachers need to design an environment that supports the process. But today's learning process still gives the dominance of the teacher and does not provide access for students to develop independence through the process of discovery in the process of thinking. Even though what is expected in the process of learning biology is the existence of active participation of students and interaction between students and teachers to produce good learning outcomes (Trianto, 2014).

Based on the facts found in the field when the researcher did observation and interviews with Biology Science subject teachers at SMP Negeri 2 Wundulako obtained information that the teacher applied the learning method lectures and discussions but in fact, the application of learning methods is still not optimal. This is shown by the attitude of students who are passive during the learning process and students do not have curiosity about the lesson. Most students are also unable to concentrate for a long time and pay attention to the teacher, they are more preoccupied with their respective activities like chatting with their friends or doing things they think are more interesting. Learning tends to take place in one direction with the teacher as the main learning resource. While the teacher is active, passive students receive the material. With In other words, learning is not student-centred and student-oriented student learning activities.

Student learning outcomes are also still not entirely able to reach the Criteria Minimum completeness (KKM) is under a score of 70 so it must be done remedial. Acquisition of scores that tend to be low is an illustration of how the ability level of students has not been able to master the subject matter. Still, some students are passive during the learning process takes place encouraging writers to provide more stimulation to students. Eye Biology lessons require the application of models that can make students interested because it greatly influences the success in learning.

Based on these problems the learning model is different from Previously that can be used is the cooperative learning model. Cooperative learning is a form of learning using students to study and work in small groups of four up to six people collaboratively with a heterogeneous group structure. This learning was developed to achieve three objectives, namely learning outcomes in academics, acceptance of diversity and development of social skills. The wrong cooperative learning model is the role-playing learning model (role-playing). Playing a role (role-playing) is a learning model that involves students pretending to play the roles/figures involved in the learning process. In this model, students are conditioned in certain situations that adapted to the material being taught. The goal is for students can play an active role during the learning process takes place.

B. Literature Review

Role-playing is an experience-based learning model designed in a certain scenario to achieve learning goals. Students are directed to identify applied accounting in the real world. They take turns to play roles; an accountant must completely understand his work and the relation of an accountant's work to other sections or departments, especially organizational activities that have implications for financial aspects. Role-playing learning encourages students to actively participate and cooperate, to excitedly play roles, to improve their confidence, and to improve students' skills in constructing their knowledge. This research shows that the role-playing learning model for basic competence of practising accounting cycles in service companies is proven effective to improve the twelfth-grade social high school students learning motivations and achievements. Researcher suggests that the role-playing model can be applied to other accounting learning themes (Saptono et al, 2010)

The role-playing learning model is contextual. In accounting learning, such a learning model will be very beneficial to juxtapose students' knowledge with accounting best practices in the real business world. They are asked to play the role of an accountant to identify an accountant's jobs as well as various interactions with other jobs in a business entity. Therefore, students will not only learn imaginatively, yet they construct the knowledge they have based on their experiences and the surrounding business environments. In the role-playing learning model, students are required to act based on scenarios without ruling out any possibilities for students to improvise (Martin & Hanington, 2012).

According to Mulyono, (2011) Role-playing learning model (role-playing) is a learning model in which it reveals the existence of feigned behaviour of the students involved or imitation of situations to play out role/figure in the process of mastery of learning materials. In this model, students are conditioned in certain situations that are adapted to the material presented being taught.

C. Methodology

1. Research Design

This research is a quasi-experimental study consisting of two groups The design can use a pretest-postest control group design. This research involves two classes given different learning models, namely the experimental class applying the role-playing model (role-playing) and the control class applying conventional learning models (lectures and discussions).

The stages of treatment in this study include giving an initial test or pre-test, giving treatment to the experimental class and control, and post-test or post-test. Experimental class learning activities by steps for using the Role Playing method. Implementation Learning with Role Playing is done 3 times meeting The treatment received by the control class is learning with various lecture methods. Learning steps are carried out in the control class according to the learning teachers usually do. The material given in the control class was the same as that received in the experimental class

2. Instruments

To obtain data about students' science learning outcomes, especially in digestive system material, one test instrument was used. This test works to measure the level of mastery of the digestive system material after learning within a certain time. The form of the test used is a choice of 20 questions multiple choice.

3. The Technique of Data Analysis

Descriptive Statistical Analysis aims to see the comparison of scores after the posttest obtained by students in the class being taught by using the role-playing learning model (role-playing) (class experiments) and classes taught using learning models conventional lectures and discussions (control class) using applications Microsoft Excel v16 and SPSS v24.

The normality test aims to find out whether the data is distributed normally distributed or not. Test for normality using the test Kolmogorov-Smirnov statistics using the spss for the program Windows 16. Criteria in normality testing if the value arithmetic significance > 0.05, it is concluded that the data is distributed normally

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The data tested is the difference in the average value of the pre-test or test initial and post-test or final test. The technique used by researchers to test the hypothesis is to use the t-test (t-test). The t-test formula (t-test) is used to determine the difference in the difference the average of the experimental class and the control class. The difference in the average is to determine the significance of the t count with a t table with a significance level of 5%.

D. Findings and Discussion

1. Findings

Cognitive learning outcomes students are intended to provide an overview of the characteristics and differences between role-playing learning models (role-playing) with conventional learning models that can be seen through grades mean (mean) and the proportion of post-test scores in both the control class and the experimental class. Posttest cognitive learning outcomes of students from the control class and class experiments can be seen in the following Table 1

Based on the description of the table above in the control class students are taught using conventional learning models of lecture and discussion methods and have the highest percentage of 50% with an average value of 54.46 which is in the category "Medium". While in the experimental class students were taught using cooperative learning models role-playing models (role-playing) has the highest percentage of 46.43% with an average value of 80.00 which is in the category "High". This shows that the average cognitive learning outcomes of students on the material of the digestive system in the experimental class are higher than the

average cognitive learning outcomes of students on the digestive system material in the control class

Table 1. Posttest Cognitive Learning Outcomes

No	Value intervals	Category	Control		Experiment	
			Total	Percentage	Total	Percentage
1	86-100	Very High	0	0	8	28,75%
2	71-85	High	0	0	13	46,43%
3	56-70	Currently	14	50%	6	21,43%
4	41-55	Low	8	28,57%	1	3,57%
5	0-40	Very Low	6	21,43%	0	0
	Total		28	100%	28	100%

The normality test was carried out to determine whether the study population was normally distributed or not. For this test use the normality test Shapiro-wilk. The rule used to determine whether something is normal or not distribution $p > 0.05$ distribution is declared normal if $p < 0.05$ distribution is said not normal. This Normality Test was carried out on data from the experimental class and the control class includes the results of the final test of each class. From the calculation of the normality test the results obtained in Table 2. below:

Table 2 Normality Test of Shapiro-Wilk Learning Outcomes

Group	N	Sig.	Description
experimental posttest	28	0,108	Normal
posttest control	28	0,050	Normal

Based on the table above shows that the posttest experimental class has a significant value of 0.108. Meanwhile, in the posttest control class, it was 0.050. so that the two classes of science learning outcomes are normally distributed. Because the significant value of the variables above is greater than 0.050.

Before the independent sample t-test was carried out in both groups' research then there is a condition that will be carried out that is looking for homogeneity values. In this study, the homogeneity value was obtained by using a test homogeneity of variance. This sample is declared homogeneous if the sig is based on a mean > 0.05. if the data is not homogeneous (conditions are not met).

The results of the homogeneity test of the two sample groups can be seen in the following table:

Table 3. Posttest Homogeneity Test of Experimental and Control Classes

		Levene statistic	Df1	Df2	Sig.
Result	Based on Mean	0,738	1	54	0,394
	Based on Median	0,530	1	54	0,470
	Based on Median with Adjusted df	0,530	1	53,541	0,470
	Based on trimmed mean	0,617	1	54	0,436

Based on the table above, the average sig value is 394 > 0.050, so it can be concluded that the variance of the experimental posttest and posttest class data control is the same or homogeneous.

The hypothesis test used in this study is the independent t-test which was carried out to see whether there were differences in the results of the students' post-test from the experimental group and post-test students from the control group. The calculation results of Hypothesis testing can be seen in the following table.

Table 4. Test of Independent Sample T-test Posttest

Class	t count	t table	Sig.
control class	8,799	1,674	0,000
experimental class			

Based on the Independent t-test post-test table at the significance level α =0.05 in the control class and the experimental class above, a significant value is obtained 0.000 <0.05 or the calculated t value is greater than the t table with a calculated t value of 8.799 and t table 1.674 then H0 is rejected and H1 is accepted. With the rejection of H0. This matter means that there are differences between students who are taught using the play model role (role-playing) in the experimental class compared to students taught by using the conventional learning model, namely (the lecture method and discussion) in the control class.

2. Discussion

The results of the descriptive analysis show that there are differences in learning outcomes IPA on digestive system material using a role-playing model (role-playing) and conventional. So it can be concluded that the "influence learning model is playing a role (role-playing) on science learning outcomes in class VIII digestive system material at SMP Negeri 2 Wundulako". With compare the average value of learning outcomes (posttest) of 80.00 in the class experiments which show that students are taught by using a model of role-playing (role-playing) is higher than learning outcomes (posttest) of 54.46 which is taught using a learning model conventional. Based on inferential analysis using an independent test sample t-test obtained a significant value of 0.000 <0.05 or a calculated t value greater than on the t table with t count value 8.799 and t table 1.674 this means there is a difference significant difference between student learning activities in the control class and the experimental class.

Learning in the experimental class uses the method of Role Playing or role-playing. The Role-Playing method in its implementation is done by playing a role or playing a role in the dramatization of social problems. As conveyed by Hamzah (2010) that the Role Playing method helps students discover identity in the social world and solve dilemmas or problems that arise faced. This method is attractive to students because the learning process is carried out like a game. Role-playing as Djamarah and Zain (2006) Role-playing can make students better understand the material

According to Atapukang, (2016), the increase in student learning outcomes is due to the use of learning models that require students to be more active. Teachers provide opportunities for students to convey information directly about learning material to their friends so that they don't directly the teacher trains students to understand the content of the material conveyed and also trains students to confidently convey material in the form of communication.

In the learning process in the control class where students are taught using lecture and discussion methods students still feel embarrassed to express opinions and involve themselves in the discussion process. Whereas the learning process in the experimental class is taught by using model role-playing (role-playing) students are actively involved in asking, answering questions and appearing in front of the class to play a role (role-playing). Johnson (2014), revealed that students who are confident in communicating will convince in conveying the message, and listeners will believe, hear and carry out the messages conveyed by students.

In other words, the application of science learning by using the role-playing model is proven to affect students' cognitive learning outcomes, especially in the digestive system material. Therefore, to improve students' cognitive learning outcomes then the application of the play model role (role-playing) can be done in science learning. So it can it was concluded that science learning especially on the digestive system material through the role-playing model (role-playing) affects learning outcomes for students in class VIII SMP Negeri 2 Wundulako.

E. Conclusion

Based on the results of the research and discussion that has been presented. So it can be concluded that there is an influence of role-playing models on learning outcomes for students at SMP Negeri 2 Wundulako with a significant value of 0.000 <0.05.

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