

The influence of science environment technology society (SETS) approach by using fishbowl method at the the thematic learning

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Abstract: This study aims to determine whether or not the influence of the Science Environment Technology Society (SETS) approach with Fishbowl Method on the thematic learning learning outcomes of the fourth grade students of SDN Banjarejo. This research is a quantitative research. The population of this study was fourth grade students of SDN Banjarejo in Madiun city, and the techniques in choosing sample is by using simple random sampling. While the research design is Posttest-Only Control Design. The technique of answering data using the test method with 20 MCQs. The data analysis technique used is hypothesis testing using the t-test (t-test) which previously tested the requirements for normality test and homogeneity test data. Based on the results of the hypothesis test with the t-test showing that tcount = 2.543 >ttable = 1.67356 then H1 is accepted which means using the SETS approach with the Fishbowl Method is more effective than the conventional method seen from the results of better student learning outcomes in the experimental class.

Keywords: science environment technology society (SETS) approach, fishbow method, thematic learning learning outcomes

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INTRODUCTION

Thematic learning is part of 2013 curriculum which contains more than one subject that is linked in one theme, and it is used from class I to class IV in elementary school. Thematic comes from the word theme, previously the word theme is called tithenai which comes from Greek which means "place" can also be interpreted as "putting down", after development, the word turns into a theme. Poerwadarminta (Majid 2014: 80) states that thematic learning is integrated learning that contains several subjects linked to one theme, so students will get a more meaningful experience. The theme is the main ideas or ideas that become the main topics of conversation. Through thematic learning, students will be active in building the cognitive knowledge, and the teacher acts as a facilitator and mediator.

Based on a survey conducted by researcher, it is found that currently there are 50% of grade IV students who have not demonstrated their activity in learning activities, especially in thematic learning, only some students show their activity in classroom learning activities. Most of them are still shy and lack of confidence in expressing their opinions. The rest of them seem only listen explanations from the teacher, so that they are less active in the learning process.

Many learning methods can be used by teachers in delivering learning material, especially in active, creative, innovative and fun thematic learning. In pleasant conditions, the lesson will run well and students will not feel bored in thematic learning. The approach and method that can be used is the Science Environment Technology Society (SETS) approach with the Fishbowl method. Binadja (in Ragil and Sukiswo, 2011: 70) states the SETS approach should be able to make students understand the relationships between the concepts in SETS. This relationship cannot be separated from each other, so students who study it must truly understand and comprehend it. While fishbowl according to Tarmiyusika et al (2016: 4) states "the fishbowl method is a peer learning group discussion technique, in which there are external and internal groups in implementation." The group in charge of discussing or solving a problem or demonstrating something (resource persons) while students those in the outside group will watch, listen and record (the listener). The outside group sits around the speaker, as if the outside group saw a group of fish in a bowl (fishbowl).

By implementing Science Environment Technology Society (SETS) approach with the Fishbowl method, it is expected to influence student activities in classroom learning activities, so in learning activities students are physically, emotionally and intellectually involved. Moreover, it will add insight and knowledge for students, they can exchange experiences and solve problems together, so that all students will be more active in learning activities, students are required to work together in solving problems, and allow for all students to mutually express opinions or answer questions. By using this approach and method, hopefully students will gain a variety of experiences in learning activities that are always relevant. In addition, students can also develop their thinking skills, scientific skills, and social skills such as collaboration, tolerance, and communication and students can link between the concepts they have received. With experience gained students will affect student learning outcomes. According to what was said by Sudjana (2010: 22) "learning outcomes are abilities possessed by students after he received his learning experience". Based on the description that has been stated above, the researcher is interested in conducting research under the title Effect of the Science Environment Technology Society (SETS) approach with the Fishbowl Method on Thematic Learning Learning Outcomes in Grade IV Students of SDN Banjarejo ".

METHODS

In this study, the method applied is quantitative research using experimental methods, the design that will be used is True Experimental Design with Posttes Only Control Design research type. There are two groups namely the experimental class and the control class

chosen randomly or randomly. The experimental class is the group that will be given treatment, while the control class is not given treatment.

The population in this study was all fourth grade students of SDN Banjarejo, Madiun City in the even semester of the 2018/2019 academic year. The total population is 86 consisting of three classes, namely class IV A Banjarejo State Elementary School with a total of 30 students, class IV B Banjarejo Elementary School with a total of 28 students, and class IV C Banjarejo Elementary School with a total of 28 students. In this study, the selected sample is class IV B as many as 28 students as the experimental class and class IV A as many as 28 students as the control class, so that a sample of 56 students is obtained.

The independent variable in this study is the Science Environment Technology Society (SETS) approach with the fishbowl method. The dependent variable in this study was the learning outcomes of thematic learning in class IV SDN Banjarejo in Madiun City. Instrument testing was conducted to determine the validity and reliability of the items. While the hypothesis test analysis techniques in this study used the t-test (t-test) which was previously tested for normality by the Liliefors method and homogeneity using the F-test with a significant level of 5%.

RESULT AND DISCUSSION

The research data were taken from two classes, namely the experimental class, IVB SDN Banjarejo, Madiun city, the total is 28 students, and the control class, namely IVA class, SDN Banjarejo, Madiun city, the total is 28 students. In this study the normality test uses the Liliefors formula with a significant level (α) of 0.05. The area of criticism in this test is DK = {L | L> L0.05, n}.

			5	
Kelas	Lhitung	Ltabel	Keputusan	Kesimpulan
Experiment	0,153	0,164	H₀ diterima	Berdistribusi Normal
Control	0,154			

Tabel 1 the result of Normality Test

Table 1 shows the results of the normality test of the experimental class and the control class both of which come from populations that are normally distributed because of Lhitung> Ltable. To find out the variances of a number of populations, a homogeneity test is needed to determine whether they are the same or not. The statistic used is the F test, with a significant level of $\alpha = 0.05$. Homogeneity test results can be presented as follows.

Tabel 2 the result of Hpmogenity Test

Fhitung	Ftabel	criteria	Homogenity test
1,15	1,90	$F_{hitung} < F_{tabel}$	The data is
			homogen

From the table above shows Fcount <Ftable, it can be concluded that the population is homogeneous. Based on the normality and homogeneity test, it can be concluded that the normality test of the population is normally distributed and the results of the homogeneity test can be stated that the population has a homogeneous variant, hence it is the next step that is hypothesis testing using t-test with a significant level used is 5% ($\alpha = 0$, 05).

With the following hypothesis: H0 = There is no influence of the science environment technology society (SETS) approach with the fishbowl method on the learning outcomes of thematic learning in fourth grade students of SDN Banjarejo, Madiun City Academic Year 2018/2019. H1 = There is an influence of the science environment technology technology society (SETS) approach with the fishbowl method on the learning outcomes of thematic learning in fourth grade students of SDN Banjarejo Madiun City Academic Year 2018/2019.

From the results of the analysis of the power obtained is t = 2.543 greater than t table = 1.67356. Kerietria test H0 test is accepted if tcount <ttable and H1 is accepted if tcount> ttable. So in this study it can be concluded that H1 was accepted because tcount> ttable is 2.543> 1.67356.

Based on the results of hypothesis test, using the t-test by testing the experimental class and the control class, it was found that there was an influence of the Science Environment Technology Society (SETS) approach with the fishbowl method on the learning outcomes of thematic learning in fourth grade students of SDN Banjarejo. The existence of this influence is proven by the difference in the results of the experimental class posttest and the control class. Learning conducted on 28 students in the experimental class obtained a mean value of 82.857, with the highest value of 100 and the lowest value of 70. While in the control class it was conducted on 28 students obtained a mean value of 76.25, with the highest value of 95 and the lowest value of 60.

The above conclusions indicate that the results of the study are in accordance with the research hypothesis which states that the thematic learning outcomes using the Science Environment Technology Society (SETS) approach with the fishbowl method affect the learning outcomes of thematic learning to be better than using conventional methods. This can be seen when the Environmental Environment Technology Society (SETS) approach has not been implemented with the fishbowl method, learning activities are only centered on the material delivered by the teacher. However, after the adoption of the Science Environment Technology Society (SETS) approach with the fishbowl method for the experimental class, the participation of students in the learning process was far more active than in the control class. It can be seen when the learning activities carried out there are interactions between teachers and students, as well as students and students. Teacher interaction with students occurs when the teacher gives a number of questions to the students. While the interaction between students and students when the teacher gives discussion tasks to the group members. With the variance of methods, learning activities were more fun and not boring because they could excite students to create ideas / opinions that students have in learning activities. The Science Environment Technology Society (SETS) approach with the Fishbowl method is an approach and method that make students more active in developing new ideas / ideas they have. While the fishbowl method encourages students to contribute their opinions to solve problems and add students' insights to the new knowledge they have gained.

The application of the Science Environment Technology Society (SETS) approach to the fishbowl method will affect student learning outcomes to help them link their concepts and ideas in thematic learning. Thus, the experimental class that was treated using the Science Environment Technology Society (SETS) approach with the fishbowl method was better than in the class that was not treated. This is proven by the mean value in the experimental class obtained 82.885 superior, because in the experimental class there are interactions that occur during the learning process, in addition to the Science Environment Technology Society (SETS) approach with the fishbowl method students can link between concepts contained in thematic learning, so students can create new ideas they have and students are more active during the learning process. While the control class obtained an average of 76.25, because in the control class learning is only centered by the teacher, so the lack of interaction during the learning process.

From the results of the above analysis, the data of the influence of the Science Environment Technology Society (SETS) approach with the method of bowling to the learning outcomes of the students in the fourth grade students of SDN Banjarejo, Madiun academic year 2018/2019, obtained tcount = 2.543 is greater than ttable = 1.67356 so H1 is accepted. This shows that the hypothesis reads there is an influence of the Science Environment Technology Society (SETS) approach with the fishbowl method on the learning outcomes of thematic learning in grade IV SDN Banjarejo Madiun City in 2018/2019.

CONCLUSION

Based on the results of research and discussion in the previous chapter, it can be concluded that the Science, Environment, Technology, and Society (SETS) approach with the Fishbowl method can make thematic learning outcomes better in class IV students of SDN Banjarejo, Madiun City in 2018/2019. This is evidenced by the results of analyst data obtained is t = 2.543 greater than t table = 1.67356. Test criteria H_0 are accepted if t_count <t tabel and H_1 are accepted if t_count> t_table. So in this study it can be concluded that H_1 is accepted because t_count> t_table is 2.543> 1.67356. Based on the conclusions obtained above, the researcher gave several suggestions to several parties to improve the quality of education, especially in thematic learning. These suggestions are as follows (1) for students: With the innovation in the learning process with the approach of Science, Environment, Technology, and Society (SETS) with the Fishbowl method, students are expected to be more active in the learning process. In addition, the application of the SETS approach with the fishbowl method can enhance student learning outcomes, (2) Teachers: should be able to determine effective learning methods and approaches to improve students' abilities so that they can improve student learning outcomes, and teachers should create a more pleasant learning atmosphere in order to increase student activity. One of them is by using the Science, Environment, Technology, and Society (SETS) approach with the Fishbow method, (3) Other researchers: this research is expected to be used as a source or reference for gaining experience and increasing knowledge in teaching activities as well as a reference in conducting similar research with a broader scope. Due to time constraints, many shortcomings in the preparation of this study, it is expected that other researchers can improve the quality of similar research, so that the research carried out is better for improving the quality of education.

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