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The Use of Fable Stories in Science Learning in Fifth Grade Elementary School

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***Abstract*—This study aims to determine the differences in science learning outcomes of fifth grade elementary school students in the use of fables on animal adaptation material to their environment. This research is a quasi-experimental research with a nonequivalent control group design. Sample in this study were 27 fifth grade "A" students in Deresan Elementary School as the experimental group and 27 fifth grade "B" students as the control group. The treatment applied in the experimental group was fable. The fables used are classical and modern fables that are compatible with the animal's adaptation material to their environment. The data of this study were obtained from the results of the pretest and posttest in the experimental group and the control group. The results of data analysis showed that the average posttest score of the experimental group (Mean = 68.59; SE = 1,894) had an average posttest score higher than the control group (Mean = 63.23; SE = 2,763). This difference is not significant $t(51) = 1.661$ $p > 0,05$ and has a "small" effect with r = 0.220. The conclusion from the results of data analysis is that there is no significant difference in the science learning outcomes of fifth grade elementary school students in the use of fables.**

Keywords: fables, learning outcomes, stories, science

I. INTRODUCTION

Samatowa (2011) mentions that natural science (IPA) as a discipline and its application in life makes science an important subject to be taught in elementary schools. This is because natural science trains children to think critically, objectively, science process skills, develop curiosity and logical thinking. This has become one of the theoretical bases aimed at motivating children to express their creativity.

Wisudawati and Sulistyowati (2014) state that the fundamental problems that are often faced by teachers in learning science in elementary schools include various problems involving aspects of science. Plus another problem is the limited availability of learning media. Based on this opinion it can be assumed that not many teachers use instructional media as a tool to deliver learning material. Thus, the teacher does not know whether the student really understands and comprehends the material presented so that student learning outcomes are less than optimal.

According to Dahar (2011) a good learning process is the interaction between the components in the school, namely teachers, students, principals, subject matter / teaching materials (books, media, magazines, etc.). The cognitive development of elementary school students (7-11 years), according to Piaget, is included in the concrete operational stage. A person's success in achieving science learning outcomes should be applied based on direct experience, realities in the environment and through artificial objects. Teachers can play a role in arranging learning in the classroom using innovative and creative learning media that are fun based on the child's cognitive development.

According to Nurgiyantoro (2013) fables are children's reading with animal characters as the main characters that can trigger a child's attraction to read them. It is understood that the contents in the fable reveal the image of life that is told through animal figures, is still within the reach of children both involving aspects of emotions, feelings, thoughts, sensory nerves, and moral experience, and expressed in the form of language that can be understood by children. Detlor (2001) explains that by using fables in learning a teacher has the opportunity to explore children's language potential; building the development of moral ethics in children; building class communities through discussion and debate about ethical behavior; children can encounter a variety of attitudes and life behaviors that reflect a group, develop imagination, and develop critical behavior to apply ethics in the real world. Furthermore Krishna (2019) Aesop's fable can be used by parents and teachers as learning material for children in order to teach morals and build good character to children. In this research students are able to explain various moral values that are able to become character education in their lives. Based on the explanation above, it becomes a reference to use the media "Aesop Fable" in addition to educating student characters, also to improve student learning outcomes in the material adjustment of living things to their environment.

In addition to learning media, the use of the

TAI (Team Assisted Individualization) model also plays a role in achieving learning objectives. The TAI method yields the advantages of cooperative learning and individual learning. As stated by Huda (2016) other than that smart students can develop their abilities and skills. This can motivate students to learn the material provided quickly and accurately without shortcuts. The existence of responsibilities in groups can solve problems and students are also taught to work together in groups, so as to create a positive attitude between them. According to Soimin in Pratiwi (2019) states that the TAI (Team Assisted Individualization) model has theoretical and practical fundamentals to adapt learning to individual differences related to the ability and achievement of student achievement. It was also conveyed by Ningrum (2018) and Budianti (2014) stating the intended use of the TAI model through the process individual learning in groups because, in learning TAI difficulties experienced students can be solved together with the chairman as well teacher guidance. The success of each individual determined by the success of the group, so that good social interaction skills are needed among all group members. On the basis of some of the above theories the researcher uses the TAI model with the help of fable stories to see the difference in learning outcomes from the lecture method that is usually done by the teacher.

This study aims to determine the differences in science learning outcomes of fifth grade elementary school students in the use of fables on the material adaptation of animals to their environment.

II. METHODS

In this study, the Quasi Experiment design used in this study is Nonequivalent Control Group Design, which compares two groups (experimental and control groups) where each group is given a pre-test and post-test, but only the experimental group is given treatment. The sample of the experimental group in this study amounted to 27 students and the control group sample consisted of 27 students in the Deresan Elementary School.

III. RESULTS AND DISCUSSION

Based on research data in the field that has been tested with tests of normality, homogeneity, and, so that the next step to find out the results of differences in learning outcomes is tested using a large test of influence and significance of the average test score.

Hypothesis Test Results

Hypothesis testing is done using parametric statistics with the Independent T-test. The results of the analysis of the study showed that there was no difference in the learning outcomes of science students in fifth grade elementary school in the use of fable media on material adaptation of animals to their environment.

Table 1. Hypothesis Test Result

Group Statistics

	Faktor	N	Mean	Std. Deviation	Std. Error Mean
Post test	Eksperimen	27	68.59	9.842	1.894
	Kontrol	26	63.23	14.086	2.763

Independent T-test

			Skor *Posttest*	
			Equal variances assumed	Equal variances not assumed
Levene's Test for Equality of Variances	F		3.854	
	Sig.		.055	
T-test for Equality of Means	T		1.611	1.601
	Df		51	44.561
	Sig. (2-tailed)		.113	.116
	Mean Difference		5.362	5.362
	Std. Error Difference		3.327	3.350
	95% Confidence Interval of the Difference	Lower	-1.318	-1.386
		Upper	12.042	12.110

The calculation results in table 1. show that the F calculated at the 95% confidence level with the equal variance assumed is 3,854. Independent T-Test Values sig. (2-tailed) is 0.113. Independent T-Test value of $0.113 \geq 0.05$, then Ho is accepted or Ha rejected, meaning that there is no significant difference between the average posttest score of the experimental group and the control group. The conclusion of the results of the Independent T-test posttest score data states that there is no significant difference between the average posttest score of the experimental group and the control group or there is no difference in the science learning outcomes of fifth grade elementary school students in the use of fable media on material adaptation of animals to their environment.

Large Test Results Influence

The result of the calculation of the effect size shows that r is 0.220. The value of r is consulted with the effect size category, included in the category of small effects (small effect). The results of a large percentage of the influence of the use of fable media can be known through the calculation of the coefficient of determination formula is 4.84%. The conclusion that can be drawn based on the results of the analysis of the data is that in general the experimental group (Mean = 68.59; SE = 1,894) has an average posttest score higher than the control group (Mean = 63.23; SE = 2.763). The difference in mean posttest scores was not significant t (51) = 1,661 p> 0.05 and had a small effect of 0.220. The coefficient of determination shows that R^2 is 4.84%, which means that the increase in student learning outcomes influenced by the use of fable media is

4.48% while the rest of 95.52% is influenced by other variables outside the variables studied.

A. Hasil Uji Signifikansi Selisih Rata-rata Skor Pretest dan Posttest

The results of the calculation of the significance of the difference in the average pretest and posttest scores of the experimental group showed that the price of sig. (2-tailed) Paired T-test is 0,000. Value of 0,000 <0.05, then Ho is rejected or Ha is accepted, meaning that there is a significant difference between the average difference in the pretest and posttest scores in the experimental group. The test results of the significance of the difference between the pretest and posttest scores of the control group showed that the sig. (2-tailed) Paired T-test is 0,000. Value of 0,000 <0.05, then Ho is rejected or Ha is accepted, meaning that there is a significant difference between the average difference in the pretest and posttest scores in the control group.

B. Discussion

The results of the data analysis showed that there was no difference in the learning outcomes of science students in grade V elementary school in the use of fables on the material adaptation of animals to their environment. Hypothesis testing states that learning outcomes are abilities possessed or controlled by students after they have received their learning experience. Posttest score data is the result of student learning process, after students get treatment using fable media for the experimental group and using other media for the control group as the delivery of material. The results of research analysis prove that the price of sig. Independent T-test (2-tailed) of 0.113 ≥ 0.05, then Ho was accepted, and Ha was rejected, meaning there was no significant difference between the average posttest scores in the experimental group and the control group. The results of the analysis of this study are against the theory put forward by Nurgiyantoro (2013) that the benefits of fables as children's reading in educational values is to develop the intellectual aspects of children. The results of the study are also not in accordance with Joseph Frank's opinion (in Asfandiyar, 2007), that story is one of the effective ways to develop cognitive aspects (knowledge), affective (feeling), social, and cognitive aspects (appreciation) of children young children.

In fact, the teacher's effort in building a positive attitude with the use of fable media only gives a large "small" effect on the learning outcomes of science students in grade V elementary school as indicated by the price of r = 0.220 or 4.84%. Thus, it can be said that the fable media influence 4.84% of the natural science learning outcomes of fifth grade elementary school students, while the remaining 95.52% is influenced by other variables outside the studied variables.

Factors such as the use of the TAI method; school friends, student worksheets, the atmosphere of learning activities, media use, interests, motivation, and concentration can influence the results of the analysis of this study. These factors can be observed directly when the learning process takes place.

Some components in the implementation of learning using the TAI method that can't be done correctly are teaching groups, teams, student creatives and team scores and team recognition. The existence of learning components that are not done correctly can be a factor in the absence of differences in science learning outcomes of fifth grade elementary school students. In addition, the school environment such as classmates can affect student enthusiasm for learning. Group Worksheets to fill in the table can also be a factor influencing differences in learning outcomes that are not significant. Students feel confused when filling a table with a large number of columns. This can be seen from the example tables in the learning tools used in the experimental and control groups. The use of fable media itself can also be a factor that can influence insignificant student learning outcomes. The possibility is because the contents of the story in the fable media are too many, making students not read the entire contents of the story, because they have to exchange with other students. It can be seen that in the fable media attachment there is a story which contains too many pages reaching 3 pages. Based on these explanations provide evidence that there are no significant differences in learning outcomes in learning using the fable media.

Since there is no difference in the use of fables for science, it proves that fable media has no effect in improving and instead becomes an obstacle to the learning outcomes of science. In relevant research studies it is also very difficult to find articles that say that with fables can improve learning outcomes of science. So fables are not suitable when combined with science learning. In fact, according to several other research studies, fables become relevant when correlated with character education, linguistics (the ability to read and write), and life learning. As stated in research from Pelletier, et.al. (2015); Juanda (2018); Clayton (2008); Yuliati (2017); states if the fable story media (Aesop Fable) is more appropriate to be used with the aim of implementing moral values and life learning in students. This is to educate the affective aspects in students. In addition to the actual reference, there is a classic article from Hariti (1998) that also outlines the moral teaching of fables, that fables as a medium that reflects the character and character in the form of exclamations, advice and suggestions contained in the story.

In addition to inculcating moral values, fable stories are also more relevant for use in practicing

students' linguistic (reading and writing) abilities, as conveyed in the study of Warin et al. (2018); Puspita (2018); states if the media (Aesop) Fable is able to practice the ability to write students' narrative texts.

According to Talakua and Tehupuring (2016) using an environmental approach has proven to be effective in improving student learning outcomes with material adjusting living things to their environment. With the environment approach, making students through contextual learning (observation and observation), is different from the use of text media from fable stories. Students more quickly understand learning that is concrete and close to their lives.

IV. CONCLUSION

The conclusion that can be drawn from this study based on the discussion is that there is no difference in the learning outcomes of fifth grade elementary school science students in the use of fables in the material adaptation of animals to their environment. In general the experimental group (Mean = 68.59; SE = 1,894) had an average posttest score higher than the control group (Mean = 63.23; SE = 2,763). The difference in score was not significant t (51) = 1,661 p> 0.05 and had a small effect of = 0.220. The coefficient of determination shows that R^2 = 4.84% which means that the increase in student learning outcomes influenced by the use of fable media is 4.48% while the remaining 95.52% is influenced by other factors. This is because many factors affect the success of student learning outcomes.

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