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The Effect of Reward and Punishment Methods on Learning Outcomes of IPS In Class IV Students

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ABSTRACT
This study aims to: 1) determine differences in social studies learning outcomes between classes given the reward and punishment method and conventional classes in fourth grade students at SDN 23 Singkawang; 2) find out how much influence the reward and punishment method has on social studies learning outcomes in fourth grade students at SDN 23 Singkawang. The type of research used is quasi- experimental quantitative research (quasi experimental design) with a Nonequivalent control group design with the form of experimental class and control class. The sampling technique used purposive sampling was selected for the experimental class, namely class IV B and control class, class IV A. The experimental class was treated using the reward and punishment method, while the control class was not treated using conventional learning. The data analysis technique used in this study is the two sample t test and the effect size formula. The results showed (1) there was an influence between classes using the reward and punishment method and classes using conventional learning, seen from the calculation of the post-test learning outcomes of the experimental class and the control class using the two-sample T test showed that tcount = 2.368 > ttable = 2.0048 with a significance level of 5%, meaning that Ha is accepted and Ho is accepted rejected; (2) the reward and punishment learning method has a high effect on student social studies learning outcomes by using the effect size formula with a value of 1.104.

INTRODUCTION

Education is an effort so that humans can develop their potential to have religious spiritual strength, self-control, personality, intelligence, noble character, and the skills needed by themselves, the nation and the state through the learning process. According to Mulyono Abdurahman (Khairani: 2018) learning is a process of an individual trying to achieve learning goals or what is commonly called

learning outcomes. According to Susanto (2019:20) Learning is a combination of two learning and teaching activities. Methodological learning activities tend to be more dominant in students, while instructional teaching is carried out by the teacher. So the term learning is a summary of the words learning and teaching. An effective learning process is not only the teacher who is active in conveying subject matter, but also students who are active in the learning process, actively ask questions and actively express opinions and arguments, without these two things the learning process will run improperly, which will decrease student learning outcomes. The main thing that must be considered by the teacher in dealing with symptoms and an atmosphere that is not conducive is because a decrease in learning outcomes is a challenge for a teacher to be able to revive student learning outcomes in order to achieve optimal learning outcomes.

Student learning outcomes can grow due to several things. Whether it's stimulation from within and from the environment around students, both from a pleasant learning environment, the methods used by teachers in teaching, such as the use of reward (prize) and punishment (punishment) methods used by teachers as reinforcement, stimulus in educating students (Prayitno and Amiti, 2012:137). That student learning success was influenced by internal and external factors. Factors that influence learning outcomes include: (1) factors originating from students, (2) factors originating from the school environment, (3) factors originating from the educator's family environment, (4) factors originating from the community environment (Marhayani, 2017).

Based on the results of interviews with fourth grade teachers at SDN 23 Singkawang, that the students' cognitive social studies (knowledge) learning outcomes were low. This is because the learning process does not include the use of reward and punishment methods so that the learning atmosphere is not conducive, because there is no pleasant interaction between the teacher and students. It is this non-conducive learning atmosphere that causes problems such as the emergence of a feeling of laziness and a desire not to learn, there is no commitment to doing assignments so that students' cognitive learning outcomes (knowledge) are low. The low learning outcomes of social studies cognitive (knowledge) in class IV SDN 23 Singkawang is shown by the data on IPS test scores in class IV semester 1 with a total of 27 students which shows that there are 18 students with a percentage of 68% getting scores below the minimum completeness criteria (KKM) while , only 9 students achieved KKM with a percentage of 32%. While the minimum completeness at the school is 65. Based on the problems that exist in the school, namely the low cognitive learning outcomes (knowledge) of students the main thing that must be considered by the teacher in dealing with symptoms and an atmosphere that is not conducive because the decrease in learning outcomes is a challenge for a teacher to be able to revive student learning outcomes in order to achieve optimal learning outcomes. Student learning outcomes can grow due to several things. Whether it's stimulation from within and from the environment around students, both from a pleasant learning environment, the methods used by teachers in teaching, such as the use of reward and punishment methods used by teachers as reinforcement, stimulus in educating students (Prayitno and Amiti: 2012).

According to the English-Indonesian dictionary, the word reward means rewards, wages, prizes while punishment means punishment. Reward (reward) and punishment (punishment), apart from functioning as educational tools, also function as motivation for student learning. Motivation is a state in the person of a person that encourages individuals to carry out certain activities in order to achieve a goal encourages individuals to carry out certain activities in order to achieve a goal encouraging individuals to carry out certain activities in order to achieve a goal encouraging individuals to carry out certain activities in order to achieve a goal (Suryabrata, 2005: 70).According to Woolfolk (Prima: 2015) reward and punishment are the use of consequences to strengthen behavior. Meanwhile, according to Muliawan (2016: 242) the reward and punishment methods are interactive learning methods between teachers and students that implement a reward system for students who are active and correct in answering practice questions and conversely provide punishment for students who not active or incorrect in answering practice questions. The reward and punishment method is given with

Journal of Educational Review and Research
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the aim of educating students to feel happy by having enthusiasm in learning in order to get rewards and also be motivated to learn so as not to get punishment so that it affects student learning outcomes.

The reward and punishment method can also improve the learning outcomes of social science cognitive (knowledge) students at SDN 23 Singkawang. According to (Susanto: 2019) learning outcomes include understanding (cognitive), attitudes (affective), and skills (psychomotor). Understanding (cognitive) can be categorized into several aspects with a gradual process, each of which has its own abilities such as translating, interpreting, extrapolating, applying, analyzing, synthesizing, and evaluating. Attitude (affective) is a tendency to do something in a certain way, method, pattern and technique towards the world around it, either in the form of certain individuals or objects. Attitude refers to a person's actions, behavior or actions. Skills (psychomotor) is a direction to the development of mental, physical and social abilities that underlie as a driving force for higher abilities in individual students. Skill means the ability to use thought, reason and action effectively and efficiently to achieve a certain result, including creativity. In this study, the researchers took cognitive asper (knowledge) learning outcomes in the material Utilization of Natural Resources theme 9. Based on this, researchers were interested in conducting a study entitled "The Effect of Reward and Punishment Methods on Social Science Learning Outcomes in Grade IV Students at SDN 23 Singkawang".

METHOD

The research used in this research is quantitative research. The type of research used is a *quasi-experimental design.* This experiment was used to measure the effect of treatment *(independent variable)* and *(dependent variable).* The design used in this study is *the Nonequivalent Control Group Design.* There are two classes, namely the experimental class and the control class. According to (Sugiyono: 2018) says that the population is a generalization area consisting of objects/subjects that have certain qualities and characteristics set by researchers to study and then draw conclusions. Meanwhile, according to Sukardi (2017: 53) are research elements that live and live together and theoretically become the target of research results. The population in this study was 68 students consisting of grades IV A, B and C with each student being 27, 27 and 25. According to (Sugiyono: 2018) explains that the sample is part of the number and characteristics possessed by the population.

In this study, the researcher determined the sample by *purposive sampling.* The sampling technique is used to determine the sample when the object to be studied or the data source is very broad. *purposive sampling* is a sampling technique with certain considerations. The samples taken in this study were class IV A (control class) and IV B (experimental class) with a total of 54 students. The researchers' considerations in determining sample IV B as (experimental class) because the average knowledge ability is the same. The data collection technique used in this study was a subjective test technique in the form of multiple choices regarding the material on the Utilization of Natural Resources. This test is given to the control class and class experiment. The test given to the control class was not applied to learning methods that used conventional learning, while the test given to the experimental class was after the application of the *reward* and *punishment method.* The data analysis technique used in this research is quantitative analysis to analyze the data obtained from the learning outcomes test.

RESULTS AND DISCUSSIONS

Describes the outcome can be an increase in knowledge, skill or product. The results also reveal the level of achievement of the target activity. If in the form of objects there needs to be an explanation of product specification, its advantages and disadvantages. Output writing should include photos, charts, graphs, charts, drawings and more. The discussion is sequential in the order in which the objectives

Journal of Educational Review and Research
Vol. 6 No. 1, July 2023: 37 – 46
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are, and it has been described first. The discussion is accompanied by a logical argument by linking the results with theories, other results and/or research results.

A. Research Results

1. Average *Pre-Test* Learning Outcomes for Experiment Class and Control Class

The results of the data collection carried out during the research at SDN 23 Singkawang are the *pre test* results of students in the experimental and control classes in the form of scores from classes that are not given the method *reward* and *punishment* for the experimental class and control class using conventional learning. For details, see the following table.

Table 1. Recapitulation of Pre-Test Student Scores in Experimental and Control Classes

Information	Experiment Class	Control Class
Average	58,024	56,790
Standard deviation (SD)	13,168	13,407
Variance (s2)	173,410	179,772

From table 1 above, the average score of the pre-test students in the experimental class was 58.024 and the control class was 56.790. For a standard deviation of 13.168 and a variance of 173.410 for the experimental class, it is smaller than the standard deviation of 13.407 and a variance of 179.772 for the control class. So the pre-test score of the experimental class is different from the pre-test score of the control class. The recapitulation of the pre-test scores of students in the experimental class and control class is presented in the form of a bar chart as follows.

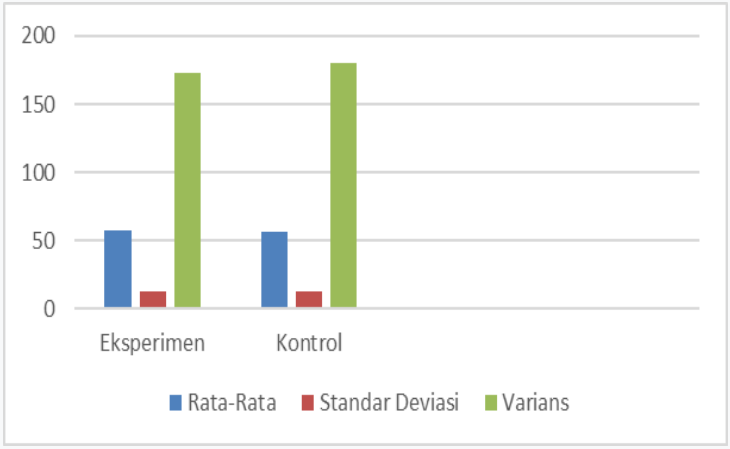

Fig1. *Bar Chart of Pre-test Scores for Experiment Class and Control Class Students*

Based on Figure 1 above, the average score of the pre-test students in the experimental class is higher than that of the control class. This shows that there is an influence on social studies learning outcomes of students.

2. Average Post-Test Learning Outcomes of Experiment Class and Control Class

The results of the data collection carried out during the research at SDN 23 Singkawang were the post-test results of students in the experimental and control classes in the form of scores from the class that used the reward and punishment method for the experimental class and the control class that used conventional learning. For details, see the following table.

Journal of Educational Review and Research
Vol. 6 No. 1, July 2023: 37 – 46
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Table 2. Recapitulation of Post-Test Student Scores in Experimental and Control Classes

Information	Experiment Class	Control Class
Average	75,555	63
Standard deviation (SD)	14,798	11,328
Variance (s2)	219	128,333

From table 2 above, the average score of the post-test students in the experimental class is 75.555 and that of the control class is 63. The standard deviation is 14.798 and the variance is 219 for the experimental class, which is higher than the standard deviation is 11.328 and the variance is 128.333 for the control class. So the pre-test score of the experimental class is different from the pre-test score of the control class. The recapitulation of the pre-test scores of students in the experimental class and control class is presented in the form of a bar chart as follows.

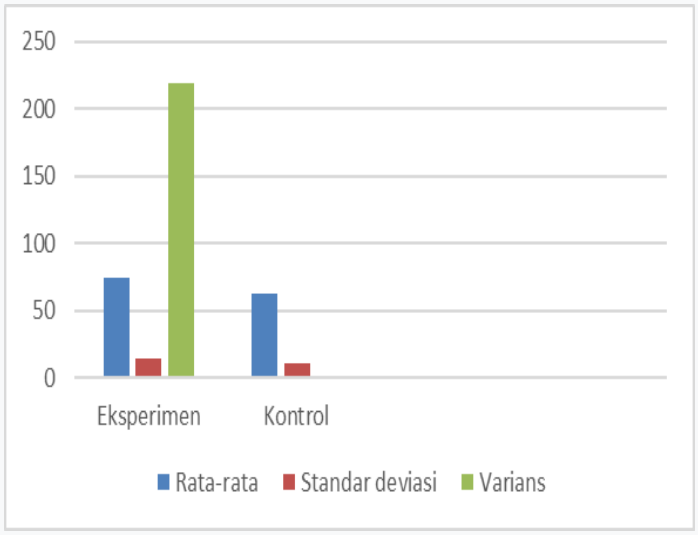

Fig2. *Bar Chart of Post-test Scores for Experiment Class and Control Class Students*

Based on the picture above, the average score of the post-test students in the experimental class is higher than that of the control class. This shows that there is an influence on social studies learning outcomes of students.

3. Data Analysis Prerequisite Testing

a. Normality test

The normality test in this study was to determine whether the pre-test and post-test data scores were normally distributed or not. The results of the analysis of the pre-test and post-test data normality test results of social studies learning outcomes for experimental and control class students can be seen in the following table.

Table 3. Calculation Results of Normality Test Data *Pre-test* Experiment Class and Control Class

Class	X^2 hitung	X^2 tabel	Information
Experiment	-13,904	7,814	Ho received normally distributed data
Control	3,243	7,814	

Journal of Educational Review and Research
Vol. 6 No. 1, July 2023: 37 – 46
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From table 3 above, it can be seen that the results of the calculation of the pre-test normality test in the experimental class obtained X2 count, which is -13.904 and X2 table is 7.814, because X2 count < X2 table, namely -13.904 <7.814, the data is normally distributed. Meanwhile, for the control class, the results of the calculation of the normality test obtained X2 counts, namely 3.243 and X2 tables, namely 7.814, because X2 counts < X2 tables, namely 3.243 <7.814, the data is normally distributed.

Table 4. Calculation Results of Normality Test Data *Post-test* Experiment Class and Control Class

Class	X^2 hitung	X^2 tabel	Information
Experiment	4,215	7,814	Ho received normally distributed data
Control	-2,752	7,814	

From table 4 above, it can be seen that the results of post-test normality test calculations in the experimental class obtained X2 count, which is -4.215 and X2 table is 7.814, because X2 count < X2 table, namely 4.215 <7.814, the data is normally distributed. Meanwhile, for the control class, the results of the calculation of the normality test obtained X2 count, namely -2.752 and X2 table, namely 7.814, because X2 count < X2 table, namely -2.752 <7.814, the data is normally distributed.

b. Homogeneity Test Using Formula F

After the pre-test and post-test score data for the experimental class and control class are calculated and the data are normally distributed, then the homogeneity test is carried out using formula f. The results of the calculation of the data homogeneity test are as follows.

Table 5. Results of *Pre-test* Calculations of Experimental and Control Homogeneity Tests

Class	Variance (s2)	Fcount	Ftable	Information
Experiment	173,410	1,036	1,904	*Pre-test* data experimental class and homogeneous control class
Control	179,772	1,036	1,904	

Based on table 5 above, the data calculation uses the formula f pre-test data, it is known that the variance of the experimental class is 173.410 and is the smallest variance, while the control class variance is 179.772 which is the largest variance so that f count is 1.036. From the f table with a = 5%, the f table is 1.904. Because f count < f table, namely 1.036 < 1.904, the experimental and control classes have the same variance and are homogeneous.

Table 6 . Results of *Post-test* Calculations of Experimental and Control Homogeneity Tests

Class	Variance (s2)	Fcount	Ftable	Information
Experiment	219	0,585	1,904	*Post-test* data experimental class and homogeneous control class
Control	128,333	0,585	1,904	

Journal of Educational Review and Research
Vol. 6 No. 1, July 2023: 37 – 46
e-ISSN: 2597-9760, p-ISSN: 2597-9752

Based on table 6 above, the data calculation uses the formula f post-test data, it is known that the variance of the experimental class is 219 and is the largest variance, while the control class variance is 128.333 being the smallest variance so that f count is 0.585. From the f table with a = 5%, the f table is 1.904. Because f count < f table, namely 0.585 < 1.904, the experimental and control classes have the same variance and are homogeneous.

c. Hypothesis Testing Using Two Samples T Test

Based on the normality and homogeneity tests, it was found that the post-test data for the experimental class and the control class were normally distributed and had the same or homogeneous variance. So to test the similarity of the mean of the two classes using a two sample t test. The results of the two sample t-test calculations are as follows.

Table 7. Two-sample T-Test Calculation Results

Tcount	Ttable
2,368	2,004

Based on table 7 above, it is known that tcount = 2.368 and ttable = 2.004 obtained tcount > ttable = 2.368 > 2.004 then ha is accepted and ho is rejected. It can be concluded that there are differences in social studies learning outcomes between classes that use the reward and punishment method with conventional learning in class IV SDN 23 Singkawang. Because there are differences, there is an influence on social studies learning outcomes between classes using the reward and punishment method with conventional learning in class IV students at SDN 23 Singkawang.

d. Effect size test

To find out how much influence the reward and punishment method has on social studies learning outcomes for students, the effect zise (ES) formula is used. The results of the zise effect calculation are as follows.

Table 8. *Effect Size* (ES) Calculation Results

Class	Average	Standard deviation	*effect size*	Criteria	Information
Eksperiment Control	75,55 63	- 11,32	1,104	High	Penggunaan metode *reward* dan *punishment* berpengaruh tinggi terhadap hasil belajar IPS pada siswa

From table 8 above, it can be seen that Es = 1.104 and the criteria are high because 1.104 is at Es > 0.8. This shows that the use of the reward and punishment method has a high effect on social studies learning outcomes in fourth grade students at SDN 23 Singkawang.

Journal of Educational Review and Research
Vol. 6 No. 1, July 2023: 37 – 46
e-ISSN: 2597-9760, p-ISSN: 2597-9752

B. Discussion

1. Social studies learning outcomes between classes that use the reward and punishment method and conventional classes.

Based on the results of research conducted on June 2 - June 7, researchers conducted research at SDN 23 which consisted of experiments and controls. Experimental class IV B and control class IV A each class consisted of 27 students. For the experimental class, the reward and punishment method was given. While the control class uses conventional learning. Before conducting the research, the researcher gave pre-test questions for the experimental class and the control class. After giving reward and punishment to the class, the researcher gave post-test questions to see the effect of student social studies learning outcomes and how much influence reward and punishment had on student social studies learning outcomes by using the normality test, homogeneity and hypothesis testing using the t-test of two samples, then the researcher conducted calculation of the post-test results of students whether the experimental class given the reward and punishment method got better results compared to the control class which was only given conventional learning.

Based on the calculation results of the pre-test data, it was found that the average experimental value was 58 and the average control value was 57. After applying the reward and punishment method, the post-test data showed that the average experimental value was 75.55 and the average control value was 63. This shows that there is a difference in the average value of learning outcomes before the application of the reward and punishment method and after the application of the reward and punishment method. In addition, based on the results of the two sample t test, it was obtained t count 2.368 and t table 2.004 meaning t count > t table so that there was an influence of the reward and punishment method between classes given the reward and punishment method and classes using conventional learning class IV SDN 23 Singkawang. The difference in learning outcomes in the pre-test and post-test for the experimental and control classes was caused by the difference in treatment between the two classes. van Meel, C. S., Heslenfeld, D. J., Oosterlaan, J., Luman, M., & Sergeant, J. A. (2011), Matera, B. D. (2009), Hoffman, L. L., Hutchinson, C. J., & Reiss, E. (2009).

The experimental class was given a reward and punishment method. The reward and punishment method or also known as the reward and punishment method is an interactive learning method between teachers and students that implements a reward system for students who are active and correct in answering practice questions and conversely provides punishment for students who are inactive or incorrect in answering practice questions (Muliawan: 2014), Atli, A., Şad, S. N., & Özer, N. (2022), Goldys, P. H. (2016), Luman, M., Van Meel, C. S., Oosterlaan, J., & Geurts, H. M. (2012), Balliet, D., Mulder, L. B., & Van Lange, P. A. (2011), Mattfeld, A. T., Gluck, M. A., & Stark, C. E. (2011), Payne, R. (2015).

So that in the learning process students can contribute their opinions to improve learning outcomes for the material that has been given. Not only that, the learning that is carried out can also improve student social studies learning outcomes because in the learning process students are given rewards and punishments. This is in accordance with the results of research conducted by (Khairani: 2018), Aypay, A (2018), DiCriscio, A. S., & Troiani, V. (2021), Watabe, A. (2018), Jean-Richard-dit-Bressel, P., & McNally, G. P. (2016). which found that the reward and punishment method affects the learning outcomes of class IV students.

2. The influence of the reward and punishment method on social studies learning outcome

Based on the results of student data calculations, the effect size value is 1.104, which is in the high criteria. It is categorized as high because the calculation results are in the criteria Es > 0.8. This is what shows that the reward and punishment method has a high effect on student learning outcomes. Based on this calculation, it can be concluded that the magnitude of the reward and punishment method for social studies learning outcomes is the high criterion.

Journal of Educational Review and Research
Vol. 6 No. 1, July 2023: 37 – 46
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CONCLUSION AND SUGGESTION

Based on the results of research data calculations and general discussion, it can be concluded that the reward and punishment method has a high influence on social studies learning outcomes in fourth grade students at SDN 23 Singkawang. In accordance with the sub-sub research problems, it is specifically concluded as follows:

a. There are differences in social studies learning outcomes for students between classes given the reward and punishment method and conventional classes for fourth grade students at SDN 23 Singkawang with the results of tcount 2.368 = and ttable 2.004 obtained tcount > ttable ie 2.368 > 2.004, so Ha is accepted and ho is rejected.

b. The reward and punishment learning method has a high influence on social studies learning outcomes for fourth grade students at SDN 23 Singkawang, with an effect value of 1.104.

This research is still a basic research with the aim of knowing whether there is an effect of the reward and punishment method on learning outcomes. For further research, the researcher suggests further research related to reward and punishment.

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