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Trisilas Value Based Cooperative Learning Method For Developing Multiple Intelligence

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ABSTRACT

The development of multiple intelligences in children is a necessity that is a benchmark for success in learning. Intelligence includes cognitive, affective and multiple psychomotor aspects that must always be balanced. To achieve this balance, learning resources are needed that are based on local cultural wisdom values, namely Trisilas Values, which are local Sundanese cultural wisdom teachings that teach balance between thoughts, feelings and actions. The purpose of this study was to analyze the effectiveness of cooperative learning based on Trisilas cultural values for students at Elementary School 1 Pawenang. This study used a quantitative method, a sample of 25 students in lower elementary schools. Quantitative data were obtained to determine the effectiveness of the Trisilas-based cooperative learning method for developing multiple intelligences and were analyzed through statistical tests. The results of this study indicate that the Trisilas-based cooperative learning method for lower elementary school students refers to aspects of thoughts, feelings and actions. The Trisilas-based cooperative learning method has proven to be effective in developing students' multiple intelligences.

KEYWORDS: Trisilas, Multiple, Intelligences

INTRODUCTION

The paradigm of human intelligence in the past was only understood from one perspective, which viewed intelligence only from logical mathematical abilities. For centuries, humans believed that intellectual intelligence was a single intelligence that could be developed. Facts in the field According to (Uswatun, 2016) formal education that takes place in schools still emphasizes the development of intellectual intelligence that prioritizes logical mathematical abilities. Basically, children who are grouped as smart children are children who have fast counting abilities. In fact, Howard Gardner's research found that intelligence is not single but plural. Plural intelligence is the entire potential that exists within an individual that is important to develop. This intelligence is not only focused on one intelligence as an indicator of intelligence.

Intelligence development should be developed as early as possible during the age of in and school age because at that time it is a rapid time in the child's development period. The

development of multiple intelligences of lower grade elementary school students must accommodate intellectual, independence, emotional maturity, and social skills, this is based on the condition that there are still many elementary school students who do not have maturity in terms of attitude such as research (Aryanti, n.d.) which found that elementary school students are not yet ready affectively in the learning process at school marked by the child's attitude that is not yet independent, self-disciplined, and the child's social emotional maturity. Intellectual immaturity in entering elementary school will also affect the child's social emotional maturity, such as the child's fear and anxiety (Novia Aisah, 2021). This is based on the fact that in the period before elementary school, children are only stimulated intellectually, such as the results of a study (Nurhayati, n.d.) on kindergarten teachers in the Sleman area, Yogyakarta, which stated that teachers tend to focus on developing children's competencies in academic skills through learning mathematics, reading and writing with the aim of preparing children to be accepted in their favorite elementary schools.

Seeing the facts in the field, how important it is to develop multiple intelligences, a method is needed by teachers to stimulate diverse intelligences. The Trisilas-based cooperative learning method is one method based on local cultural wisdom that can develop multiple intelligences comprehensively. The cooperative method is a teaching method that uses the principle of heterogeneous grouping to stimulate children to have communication relationships with groups (Pradhana et al., 2023). In the cooperative learning process, children are stimulated to have harmonious relationships with their groups as an effort to obtain good learning outcomes.

The assumption of the Cooperative learning method can be combined with the Trisilas teachings referring to the philosophical perspective on humans as social beings. An individual cannot stand alone but needs the help of others in the process of his life. (Robert E Slavin, 2009) Cooperative learning builds informal communication between students, making students quickly understand the material being discussed. Students who are a bit late in receiving the lesson material, with the explanation of their smarter friends, will find it easier to accept and understand the material being discussed, in addition they are also trained to learn to listen to the opinions of others.

Strengthened by the opinion (Sibarani, 2018) which states that the teachings of local cultural wisdom Trisilas adhere to a value system that regulates the order of social life in society. In addition, forming knowledge, skills, thinking power, social processes and prevailing norms, this becomes a belief for the behavioral process of a social community.

Local wisdom education has the principle of Trisilas which aims to produce the attitudes of Cageur, Bageur, Jelema Masagi, which are basically humans who have adequate intelligence skills, harmony in having stable social emotions, and good interpersonal intelligence. In other dimensions of science, this principle is often known as a cooperative approach where humans are social beings who need each other and therefore it is said to be love or communal interaction (silih asih) (Nugraha, 2022).

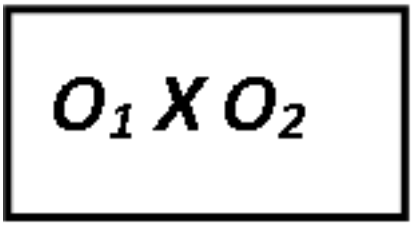
Stimulation efforts with the right teaching methods will be easily accepted by children for the development of intellectual, affective and psychomotor potential. Therefore, the development of multiple intelligences can be done by modifying learning methods with local cultural wisdom used in certain areas so that they can be used in formal education settings.

METHOD

This research method uses Quantitative Pre-Experimental Design, namely experimental research which in principle only uses one group without a control group (Creswell, 2017). The researcher used Pre-Experimental Design research in the form of One Group Pretest-

Posttest Design. The research design is a pretest before being given treatment and a posttest after being given treatment. The results obtained were then analyzed using statistics in order to determine the effect of the Trisilas-based cooperative learning method in developing multiple intelligences. The population in this study were all students of elementary school 1 Pawenang totaling 120 students, while the sample in this study was 25 students.

The reason for choosing the research location at elementary school 1 Pawenang is based on an area where the community still upholds Sundanese teachings, as well as in teaching, teachers apply the rules of Sundanese teachings, both those contained in the Purwakarta special program initiated by the Purwakarta Regency Education Office, or originating from the hereditary teachings of the Sundanese people, one of which is the Trisilas teaching, namely silih asah, silih asih, silih asuh. However, there is no form of teaching based on local cultural wisdom that combines with cooperative learning methods to develop students' multiple intelligences.



O1 = Pretes (Sebelum dilakukan Perlakuan)
O2 = Post test (Sesudah dilakukan Perlakuan)
X = Perlakuan

Figure 1. Design One Grup Pre-test Post-test

RESULT AND DISCUSSION

Based on the results of the research data, the effectiveness of using the Trisilas-based cooperative learning method to develop multiple intelligences which aims to reveal the diversity of intelligence possessed by students Elementary Schoo1 1 Pawenang can be observed in the following analysis which is grouped into two parts, namely the presentation of pretest data and posttest data.

Description of the Pretest Results Students of Elementary School 1 Pawenang Before Implementing the Trisilas-based Cooperative Learning Method

Based on the results of research conducted by researchers at Elementary School 1 Pawenang before the pretest, researchers conducted observations to see how teachers use learning methods in the classroom, observing how students respond during learning. The location chosen was class 1 of Elementary School 1 Pawenang, Bojong, Purwakarta Regency. Based on the results of initial reflection and preliminary studies before using the Trisilas-based cooperative method, researchers found problems related to the development of multiple intelligences. There are problems faced by students in developing multiple intelligences, as well as problems with teachers who are less than optimal in implementing varied learning methods.

During the research, the attitudes that occur in each student during the learning process are recorded. Based on the pretest analysis of the development of multiple intelligences of grade 1 students of elementary school 1 Pawenang with a total of 26 students, it was obtained that no student was able to obtain a score of 100 as the maximum score. The highest score was 75 which was obtained by only 3 students.

In analyzing pre-test and post-test data, researchers use this pre-test data analysis technique, researchers use the SPSS (Statistical Package for Social Sciences) version 29 program, the

purpose of using SPSS is to facilitate the calculation of research data (Sugiyono, 2010). In testing the effectiveness of the Trisilas-based cooperative learning method to develop multiple intelligence, several stages are needed as prerequisites for the paired-test statistical test (t-test) which aims to determine whether there is a difference in the average of two related samples. namely the normality and homogeneity test of data. The results of the first pre-test data analysis, data normality testing aimed to determine the results of the pre-test data in grade 1 of elementary school 1 Pawenang whether the values obtained were normally distributed or not. In calculating this normality test, the researcher used the SPSS version 29 program. The results of the normality test analysis can be seen in table 1. The normality test was carried out to determine the normality of the data distribution. The data normality test in this study used the Shapiro Wilk test. The criteria for testing data normality are if the probability value is greater than $\alpha = 0.05$, then the data is normally distributed (Winarsunu, 2006). The results of the normality test calculation with the help of SPSS (Statistical Package for Social Sciences) are as shown in table 1. From the calculation results using SPSS version 29 software, the results are known that the normality test for the experimental class is 0.08. The results of the normality test are greater than 0.05, so this proves that it is normally distributed (Winarsunu, 2006).

The second stage is the Pre-Test Data Homogeneity test by conducting a homogeneity test analysis which aims to determine the population variance and to determine whether the data has the same or different variances. The determination of the data distribution that is variable or not is seen from the magnitude of the sig value produced from the pre-test data analysis using the SPSS (Statistical Package for Social Sciences) version 29 program with the criteria if the sig value> 0.05, then the data is variable/homogeneous; and vice versa, if the sig value <0.05, then the data is not variable/not homogeneous (Sugiyono, 2010). See table 2. The results of the homogeneity data analysis show a value of 0.050, meaning that the value obtained is homogeneous because it is greater than sig 0.005.

Description of the Post Test Results Students of Elementary School 1 Pawenang after Implementing the Trisilas-based Cooperative Learning Method

Post-test data were taken after the treatment was given in the form of a cooperative learning method based on Trisilas which was carried out for 2 weeks with a total of 10 meetings. At each meeting, the teacher provided learning stimulation using the cooperative learning method based on Trisilas to grade 1 students of elementary school 1 Pawenang starting from preparation/planning, core learning, and learning evaluation. The processing of post-test results was analyzed using SPSS 29 with the requirement of data normality testing and data normality testing in this study using the Shapiro Wilk test. The criteria for testing data normality are if the probability value is greater than $\alpha = 0.05$, then the data is normally distributed (Winarsunu, 2006). So, based on the data obtained, the significance value of the Post-test results is 0.24. Because this value is greater than 0.05, this indicates that the data is normally distributed.

The next step is to see the results of the posttest homogeneity, as explained above, it was found that the homogeneity value was 0.050, which means that the value obtained is homogeneous because it is greater than sig 0.005. Based on the results of the normality and homogeneity test analysis, it was found that the pre-test data was normally distributed and homogeneous. Thus, in calculating this hypothesis test, parametric calculation analysis was used, with a confidence level of 0.05. If the value of sig (tailed-2) <0.05, then Ho is rejected and Ha is accepted. Likewise, if the value of sig (tailed -2)> 0.05. Then Ho is accepted and Ha is rejected. Attached is the normality test table and homogeneity test.

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Pretes Multiple intelegence	.147	25	.171	.946	25	.205
Posttes multiple intelegence	.186	25	.025	.922	25	.056

a. Lilliefors Significance Correction

Table. 1 Pretest-Posttest Normality Test

Tests of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Multiple intelegence	Based on Mean	4.120	1	48	.048
	Based on Median	3.004	1	48	.089
	Based on Median and with adjusted df	3.004	1	42.302	.090
	Based on trimmed mean	4.054	1	48	.050

Table 2 Homogeneity Test of Pretest and Posttest

Research Hypothesis Testing

After it is known that the research data is normally distributed and homogeneous, the next step is hypothesis testing. Data analysis before treatment is data obtained based on the pre-test results that researchers obtain from the test results conducted before conducting the treatment of the Trisilas-based cooperative learning method to develop multiple intelligences. The following are the results of the pre-test that have been conducted:

Jumlah	**Rata-rata**
1663	66,52

Table. 3 Pretest result data

Based on the data, it shows that the average pre-test value is 66.52. After the pre-test data is found, the next step is to see the post-test results that are carried out after carrying out the treatment of the Trisilas-based cooperative learning method to develop multiple intelligences. The following are the results of the post-test that have been carried out:

Jumlah	**Rata-rata**
2115	84,6

Table. 4 Posttest result data

Analysis of the improvement data is data obtained based on changes in results from pre-test to post-test that researchers obtained from the results of testing that had been conducted on grade 1 students of elementary school 1 Pawenang. Based on the results of the two tests, researchers then looked for the gain value, which is the difference in value that describes the

change in value before and after learning activities with the treatment of the Trisilas-based cooperative learning method. The following is the difference value from pre-test to post-test, a difference of 18.06 was found, thus there was a change in the results of the pretest and post-test.

Hypothesis testing was conducted to determine whether or not there was an influence of the Trisilas-based cooperative learning method to develop multiple intelligences in elementary school 1 Pawenang. This hypothesis test was conducted using a paired sample t-test. This test model is used to analyze research data before and after treatment. The purpose of this test is to test whether there is a significant influence on the average value before and after treatment. The following are the results of the hypothesis test using the paired sample t-test:

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	pretest - posttest	-18.080	7.100	1.420	-21.011	-15.149	-12.732	27	<.001

Tabel. 5 Uji hipotesis

Based on the table above, the results of the hypothesis test were found based on the criteria or basis for making decisions if the sig value (2-tailed) > 0.05 then H0 is accepted and H1 is rejected. Likewise, if the sig value (2-tailed) <0.05 then H0 is rejected and H1 is accepted. The results of the paired sample t-test hypothesis test calculation obtained a t-test value = 12.732 > 2.051 (t count> t table) with df = 27 and a sig value. (2-tailed) 0.00 <0.05. Based on these results, it shows that H0 is rejected and H1 is accepted, namely there is a significant gain. Thus, it can be concluded that the Trisilas-based cooperative learning method has an effect on the multiple intelligence of elementary school 1 Pawenang students.

Discussion of Data Analysis

From the calculation using SPSS 29 on the central tendency (data centering) shows that the pre-test score obtained a score of 1663 with an average of 66.52 and the post-test score showed a score of 2115 with an average of 84.6. Based on these values, it can be seen that the multiple intelligence of grade 1 of SD 1 Pawenang p has increased from pre-test to post-test. The results of the paired sample t-test calculation obtained a t-test value = 12.732 and df = 27 with a standard deviation = 8.811 and a sig. (2-tailed) value = 0.00. If the basis for making this decision uses a comparison of sig. (2-tailed) values, then it can be concluded that H0 is rejected and H1 is accepted because the sig. (2-tailed) value is 0.00 <0.05 and t count> t table is 12.732 > 2.051. Based on this, it can also be stated that the Trisilas-based cooperative learning method has an influence on the social-emotional development of early childhood at Pawenang 1 Elementary School.

As previously mentioned, the purpose of this study was to determine the effect of the Trisilas-based cooperative learning method on developing multiple intelligences of elementary school students in grade 1 Pawenang with a total of 25 people. The design used in this study was one group design, so that there was only an experimental class and all samples received a pre-test, post-test, and treatment of an anti-bullying education program. The research time carried out by the researcher was 12 effective learning meetings, with the following details of activities:

conducting a pre-test, treatment during the Trisilas-based cooperative learning method for 10 days, conducting a post-test, and interviews with educators.

The research data consists of two variables, namely the cooperative learning method based on Trisilas (x) and the development of multiple intelligences (y). Based on the results of the pre-test values obtained, it shows that the average value obtained by the child is 66.52. Before being given treatment, the child has not been able to show the development of multiple intelligences to the maximum as expected. The child has not shown behavior such as having interpersonal intelligence, interpersonal and verbal and communication skills well in his environment. Some children also still show non-independent behavior and do not want to communicate well with friends or teachers.

In the process of achieving multiple intelligence results, of course, there are many factors that make the target achievement results in accordance with what is expected. The teacher's ability to manage the class is one of the supporting factors in the child's learning process because the teacher has a central role in the child's learning activities. Therefore, teachers need to consistently create a meaningful learning process in order to stimulate the development of children's multiple intelligence. The benefits of implementing the Trisilas-based cooperative learning method in learning are a new breakthrough in developing children's intelligence effectively. The Trisilas teachings of silih asah silih asih, silih asus contain a deep philosophical meaning that comes from the Sundanese people's lifestyle which aims to improve the quality of humanity among Sundanese people and contains moral values of goodness in building togetherness through the lives of their people (Fauzia et al., 2020). Therefore, cultural teachings are a strong source that can be applied or combined with relevant methods to improve the quality of student learning.

CONCLUSION

Based on the results of the research that researchers have conducted at Elementary School 1 Pawenang Purwakarta, it can be concluded that:

1. The initial condition of the students in the pre-test results had a total score of 1,663 with an average value of 66.52. At the time of the pre-test, the children were not yet able to demonstrate the expected multiple intelligences. The children had not shown empathetic behavior, such as interacting well with friends or resolving conflicts in the learning process. In addition, the children had not shown the ability to understand and manage their emotions well. Some children also still showed individual behavior of not wanting to interact with friends, having difficulty communicating with teachers and not being able to solve problems simply.
2. After the Trisilas-based cooperative method treatment was carried out, children's enthusiasm for activities increased. Children can complete tasks to completion with a happy feeling, are able to follow a series of activities according to time, and are more sensitive to their surroundings, such as being able to communicate with fellow teachers, and being able to solve problems on their own. This can be seen from the increase in pre-test and post-test results, which were initially 1,663 with an average of 66.52 to 2,115 with an average of 84.6.
3. Based on the results of the paired sample t-test calculation, the t-test value was obtained as 12.732, df value = 27, and sig. (2-tailed) value = 0.00. Because the sig. (2-tailed) value is 0.00 < 0.05 and t count> t table (12.732> 2.051), it can be concluded that H0 is rejected and H1 is accepted. Thus, it can be concluded that the cooperative learning method has an effect on the development of multiple intelligences of students at elementary school 1 Pawenang.

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AUTHOR CONTRIBUTIONS

Rika Purnamasari acted as both writer and researcher in this study, starting from the initial observation of giving pretest, posttest, giving treatment, and evaluation. Nuraliyah was involved by providing support in the observation process and giving pretest, posttest, treatment and data analysis.

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