

Research Article

The Influence of the Relay Learning Method to Improve the Social and Emotional Abilities of Early Childhood in the Rehobot Ambon Christian Kindergarten

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Abstract.

The research aims to determine the effect of the relay learning method to improve the social-emotional abilities of young children at the Rehobot Ambon Christian Kindergarten. With a population of 30 people and a sample of 14 people. This research uses a quantitative research approach with a quasi-experimental approach. With pre-experimental designs in the form of a one-group pretest and post-test design. Data collection techniques use observation techniques. Data analysis techniques use normality tests and t-tests. The results of the paired samples t-test had a significance value (2-tailed) of $0.000 < 0.05$, indicating a significant difference between the pre-test and the post-test. This shows that there is a significant influence on the differences in treatment given. In accordance with the criteria, if the significant value is < 0.05 it means that H_0 is rejected and H_a is accepted. Educators need to apply the ball relay method to improve children's social and emotional skills. School principals motivate teachers to be more motivated in implementing various meaningful learning methods, as well as providing opportunities for teachers to develop themselves through various self-development activities.

Keywords: method, relay learning, social-emotional, Christian Kindergarten

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1. INTRODUCTION

Early childhood education is crucial for children as it serves as the foundational basis for learning that will develop and optimize the potentials already possessed by the child. The provision of appropriate stimuli can influence the development of basic abilities in accordance with expected developmental stages. This aligns with Law 20 of 2003 concerning the National Education System, Article 1 number 14, which states that Early Childhood Education (ECE) is an effort of guidance aimed at children from birth to six years old, conducted through the provision of educational stimuli to assist physical and spiritual growth so that children are ready to enter further education. The age range of



0-6 years is a critical period that determines the development and growth crucial for a child's future, often referred to as the "golden age."

According to Ramil, the social-emotional development of early childhood involves the child's learning process of how to interact with others in accordance with existing social norms. Children become more capable of controlling their emotions in line with their ability to identify and express these feelings [1]. Social-emotional development can be optimized through various means, one of which is through play. Play is considered a method that can be utilized to maximize social-emotional development, including aspects such as cooperation, interaction, responsibility, honesty, sportsmanship, and more [2]. Based on the above description, the developmental activities aimed at enhancing the social-emotional abilities of 5-6-year-old children at Rehobot Ambon Christian Kindergarten involve the use of the relay learning method. Sunarsih explains that relay learning is a form of learning packaged in a team-based game, where each team consists of four runners, and each runner has a specific role in the game [3].

Based on the observation results conducted by the research team at Rehobot Ambon Christian Kindergarten on 5-6-year-old children, it was found that some children still lag behind in social-emotional abilities compared to others. Out of 30 children, 76.7% (23 children) have not demonstrated very good social-emotional skills, while 23.3% (7 children) have achieved very good criteria in social-emotional skills. This is characterized by children not being able to control their emotions well, not being able to cooperate effectively in groups, lacking a sense of responsibility, and struggling with forgiving and apologizing. Additionally, the children exhibit impatience while waiting for their turn, tend to be selective in choosing friends, and constantly seek attention. The non-achievement of these aspects of social-emotional development is considered a normal occurrence.

The low social-emotional abilities in children can be caused by various factors, one of which is the lack of variety in the classroom learning process, which still revolves around teacher-centered methods. Therefore, teachers can assist children through play activities as a learning method used by preschool-age children. This research proposes relay ball games as one way to help develop the social-emotional skills of children. Some previous research findings include Sofyan, Ahmad, Rosdianti [2], who discovered an improvement in children's social-emotional development. In cycle III, children were able to join groups, interact with same-aged peers, and collaborate. Additionally, Putri, Muhajirin, found that children's social-emotional skills increased through Low Impact Outbound games after cycles I and II. Herwanto observed an enhancement in critical thinking skills and learning outcomes falling into the moderate category [4]. The

relationship between critical thinking skills and learning outcomes showed a fairly strong correlation in the highly significant category. The research aims to determine the impact of the relay learning method on enhancing the social-emotional abilities of early childhood at Rehobot Ambon Christian Kindergarten.

2. METHOD

The research approach employed in this study is a quantitative research approach with a quasi-experimental design. Experimental research is a research method conducted by researchers through experiments, is a quantitative method, and is used to determine the influence of independent variables (treatment) on dependent variables (outcomes) in controlled conditions [5]. The population studied in this study was 30 children at Rehobot Ambon Christian Kindergarten. By using the Slovin formula above, a sample of 14 children was obtained, which will later be used as a representation of the population of 30 children. An instrument is a specific tool or method, such as observation and documentation or other equipment, used to obtain or collect the necessary data to address the problem under investigation or to achieve the research objectives.

The research design used in this study is a pre-experimental design, specifically in the form of a one-group pretest-posttest design. The following is the research design used according to [5]:

TABLE 1: Research Design: One-group Pretest-Posttest.

Class	Pretest	Treatment	Posttest
Experimental	O ₁	X	O ₂

Source: Sugiyono (2019)

The implementation of this research involves three stages: (1) Preparation Stage, which includes observing at Rehobot Ambon Christian Kindergarten, preparing teaching materials such as Daily Lesson Plans (RPH), teaching materials, and research instruments for data collection. Additionally, preparing to teach with the teacher using the Estafet Learning method, (2) Implementation Stage, which involves conducting the learning process using the Estafet Learning method at Rehobot Ambon Christian Kindergarten for 4 sessions, starting with a pre-test, (3) Final Stage/Evaluation, which includes conducting a post-test (final exam).

Data Analysis Technique consist of normality test and t-Test. The normality test was conducted using SPSS 20. Setting a significance level of 5% or 0.05, if the probability is > 0.05, then the data is normally distributed. Conversely, if the probability is < 0.05,

then the data is not normally distributed. After conducting the normality test, if the data is deemed to be normally distributed, the next step is to perform a Paired Sample T-test using SPSS 20 with a significance level of 5% or 0.05. Decision-making is based on the data analysis results, where: (a) If the significance is > 0.05 , then the null hypothesis (H_0) is accepted, and the alternative hypothesis (H_a) is accepted; (b) If the significance is < 0.05 , then the null hypothesis (H_0) is rejected, and the alternative hypothesis (H_a) is accepted.

3. RESULTS AND DISCUSSION

3.1. Results

This study used a single-class subject with a total of 14 students at Rehobot Ambon Christian Kindergarten. The samples were tested before the treatment (pre-test) and after the treatment (post-test). These 14 children received the treatment four times. The following is the research process that has been conducted by the researcher.

3.1.1. Pre-test

The pre-test or initial observation before the treatment was conducted for one day on Thursday, September 28, 2023, at Rehobot Ambon Christian Kindergarten. The pre-test carried out by the research team aimed to assess the initial condition of the children's social-emotional abilities. In this context, the researchers evaluated the social-emotional abilities of the children before the implementation of the treatment. The pre-test activity was conducted by the class teacher through a question-and-answer session related to various animals. Additionally, the teacher also engaged in storytelling activities. During this session, some children showed less interest in the teacher's stories.

This can be seen from the total of 14 children, where many of them did not pay attention to the teacher and were focused on their toys. It was also observed that some children were telling stories to their friends beside them. The observations made by the team during the field observation activity led the team to assume that the children still lacked social-emotional skills without the guidance of a teacher. The pre-test results obtained during the observation process in the classroom with the assistance of the teacher are as follows:

Based on the table above, it can be seen that the acquisition of scores for each indicator of social-emotional development in children before being given treatment shows

TABLE 2: Initial Observation Results (Pre-Test) of Social-Emotional Abilities of Children at Rehobot Ambon Christian Kindergarten.

No	Observed Indicators	Observation Results				Total Score
		BB	MB	BSH	BSB	
1	The child is able to demonstrate resilience	8 child	6 child			20
2	The child has self-confidence in carrying out learning activities	11 child	1 child	2 child		19
3	The child can play independently.	10 child	4 child			18
4	The child understands rules and discipline in games.	8 child	4 child	2 child		22
5	The child can separate from parents.	9 child	4 child	1 child		20
6	The child likes to help friends.	8 child	3 child	3 child		23
7	The child is willing to forgive and be forgiven.	10 child	2 child	1 child		19
8	The child can share toys and equipment.	8 child	4 child	2 child		22
9	The child collaborates with others in play.	8 child	4 child	2 child		22
10	Enthusiastic in completing tasks.	8 child	4 child	2 child		22
11	The child is active in groups during learning activities.	10 child	4 child			18
12	The child can behave politely.	10 child	3 child	1 child		19
TOTAL						244

that the social-emotional development of children is still low. This can be observed in the table above. The research findings are described as follows:

TABLE 3: Description of Research Pre-Test Data Results.

Statistics:	Pre-Test
Sample Size	14
Mean	16,36
Median	16,50
Standard Deviation	2,061
Variance	4,247
Minimum	13
Maximum	19

Source: SPSS 20 for Windows

The pre-test results from the table above show that the pre-test data, with a sample size of 14 children, obtained a minimum score of 13, a maximum score of 19, a mean of 16.36, a median of 16.50, a standard deviation of 2.061, and a variance of 4.247.

b) Post-Test

The post-test or final observation after the treatment for four sessions at Rehobot Ambon Christian Kindergarten. The post-test conducted by the research team aimed to assess the final condition of the children's social-emotional abilities. In this context, the researchers evaluated the social-emotional abilities of the children after the implementation of the treatment. The observations made during the field observation activities indicate that the children at Rehobot Ambon Christian Kindergarten have shown improvement in social-emotional abilities. The post-test results obtained during the observation process in the classroom with the assistance of the teacher are as follows:

TABLE 4: Final Observation Results (Post-Test) of Social-Emotional Abilities of Children at Rehobot Ambon Christian Kindergarten.

No	Observed Indicators	Observation Results				Total Score
		BB	MB	BSH	BSB	
1	The child is able to demonstrate resilience		1 child	1 child	12 child	53
2	The child has self-confidence in carrying out learning activities			1 child	13 child	55
3	The child can play independently.				14 child	56
4	The child understands rules and discipline in games.			2 child	12 child	54
5	The child can separate from parents.			2 child	12 child	54
6	The child likes to help friends.			1 child	13 child	55
7	The child is willing to forgive and be forgiven.			1 child	13 child	55
8	The child can share toys and equipment.				14 child	56
9	The child collaborates with others in play.			3 child	11 child	53
10	Enthusiastic in completing tasks.			1 child	13 child	55
11	The child is active in groups during learning activities.			3 child	11 child	53
12	The child can behave politely.		1 child	2 child	11 child	52
TOTAL						597

Based on the table above, it can be observed that the scores for each indicator of social-emotional development before the treatment were low, as shown in the table above. The research findings are described as follows:

TABLE 5: Description of Research Pre-Test Data Results.

Statistics:	Pre-Test
Sample Size	14
Mean	46,50
Median	47,00
Standard Deviation	1,019
Variance	1.038
Minimum	45
Maximum	48

Source: SPSS 20 for Windows

The post-test results from the table above show that the post-test data, with a sample size of 14 children, obtained a minimum score of 45, a maximum score of 48, a mean of 46.50, a median of 47.00, a standard deviation of 1.019, and a variance of 1.038. The difference in scores between the pre-test and post-test of social-emotional abilities of children at Rehobot Ambon Christian Kindergarten can be observed below.

TABLE 6: Recapitulation of Pre-Test and Post-Test Scores of Social-Emotional Abilities of Children at Rehobot Ambon Christian Kindergarten.

Statistics:	<i>Pre-Test</i>	<i>Post-Test</i>
Sample Size	14	14
Mean	16,36	46,50
Median	16,50	47,00
Standard Deviation	2,061	1,019
Variance	4,247	1.038
Minimum	13	45
Maximum	19	48

In the table above, you can see the scores of children's social-emotional abilities at Rehobot Ambon Christian Kindergarten using relay learning (ball). Before conducting the research, the pre-test scores were obtained with a sample size of 14 children, and the minimum score was 13, the maximum score was 19, the mean was 16.36, the median was 16.50, the standard deviation was 2.061, and the variance was 4.247. Meanwhile, after the treatment, the post-test scores were obtained with a minimum score of 45, a maximum score of 48, a mean of 46.50, a median of 47.00, a standard deviation of 1.019,

and a variance of 1.038. Overall, the social-emotional abilities of children improved in the post-test scores. The following is a summary diagram of the scores of children's social-emotional abilities using relay learning (ball), as seen in the figure below:

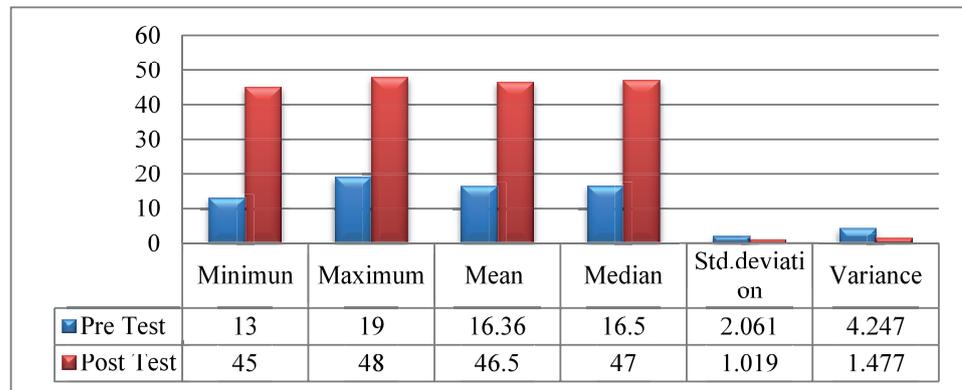


Figure 1: Recapitulation of Scores of Children's Social-Emotional Abilities Using Relay Learning (Ball).

a) Normality Test

The normality assumption was tested using the one-sample Kolmogorov-Smirnov test. The normality assumption is considered to be normally distributed if the significance value obtained from the test is greater than 0.05. Conversely, if the significance value is less than 0.05, the normality assumption is considered not normally distributed. The results of the normality test can be seen in the table below using SPSS 20 software. The results of the normality test are presented in the following table:

TABLE 7: Results of Normality Test for Pre-Test and Post-Test.

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Pretest	.145	14	.200	.921	14	.229
Posttest	.260	14	.011	.876	14	.052

Source: SPSS 20 for Windows

The data in Table 4.6 is the result of the data test using the Statistical Product and Service Solution (SPSS) Shapiro-Wilk, indicating that the normality test results for the pre-test and post-test scores of children's social-emotional abilities have significance values of 0.229 and 0.052, respectively. The significance values for both pre-test and post-test data are > 0.05, so it can be concluded that the pre-test and post-test data are normally distributed

3.1.2. t-Test

The t-test is one way to determine whether there is a significant difference between pretest (O1) and posttest (O2) results in a study. In this research, a paired sample t-test is used because the researcher only uses one class as the research sample. The results of the t-test can be seen in the table below:

TABLE 8: Results of the t-Test.

Group		Std. deviation	T	Df	Sig,(2-tailed)
Pre-test	Post-test	2,742	-41,138	13	0,000

Based on the paired samples t-test table, the significance value (2-tailed) of $0.000 < 0.05$ indicates a significant difference between the pre-test and post-test. This suggests a significant influence on the observed treatment difference. In line with the criteria, if the significance value is < 0.05 , it means that the null hypothesis (H_0) is rejected, and the alternative hypothesis (H_a) is accepted. This implies that after applying the learning with the relay learning model, there is a significant effect on the social-emotional abilities of children.

3.2. Discussion

Based on the research results at Rehobot Ambon Christian Kindergarten with the title 'The Influence of Relay Learning Method to Improve Social-Emotional Abilities of Early Childhood in Rehobot Ambon Christian Kindergarten, data from pre-test and post-test were obtained and analyzed to test normality and hypothesis testing. From the pre-test results with 14 children, it was found that the social-emotional abilities of the children were not well-developed. This can be seen from the minimum score of 13, maximum score of 19, mean of 16.36, median of 16.50, standard deviation of 2.061, and variance of 4.247. After implementing the intervention for 4 sessions using the Relay Learning method in teaching to enhance the social-emotional abilities of the children, there was an improvement. This can be observed from the post-test results, which obtained a minimum score of 45, maximum score of 48, mean of 46.50, median of 47.00, standard deviation of 1.019, and variance of 1.038.

The results of the data test using the Statistical Product and Service Solution (SPSS) Shapiro-Wilk application show that the normality test results for the pre-test and post-test scores of children's social-emotional abilities have significance values of 0.229 and

0.052, respectively. The significance values for both pre-test and post-test data are > 0.05 , so it can be concluded that the pre-test and post-test data are normally distributed.

Hypothesis testing is conducted after confirming that the data from the pre-test and post-test normality tests are normal. The results of the paired samples t-test show a significance value (2-tailed) of $0.000 < 0.05$, indicating a significant difference between the pre-test and post-test. This suggests a meaningful influence on the observed treatment difference. In accordance with the criteria, if the significance value is < 0.05 , it means that the null hypothesis (H_0) is rejected, and the alternative hypothesis (H_a) is accepted.

This means that after implementing learning using the relay learning model, there is an effect on the social-emotional abilities of children. The results of this study align with the findings of Rahmi et al.[6] that flag relay games can develop children's social-emotional skills. Similar findings were also stated by Dewi and Yuli, that water relays can stimulate children's social-emotional abilities as they engage in direct play activities[7]. Furthermore, the research by Yunita and Nefi, indicates that children are able to participate in groups, interact with peers, and show socio-emotional development through relay games with paper balls and cooperation[8].

4. CONCLUSIONS

Based on the analysis and discussion presented in the previous chapter, it can be concluded that the results of the data analysis using the Statistical Product and Service Solution (SPSS) Shapiro-Wilk test show that the normality test results for the pre-test and post-test values of children's social-emotional abilities are significant at 0.229 and 0.052, respectively. The significance value for both pre-test and post-test data is > 0.05 , so it can be concluded that the pre-test and post-test data are normally distributed. The hypothesis test was conducted after confirming the normality of the pre-test and post-test data. The results of the paired samples t-test with a significance value (2-tailed) of $0.000 < 0.05$ indicate a significant difference between the pre-test and post-test. This indicates a significant effect on the differences in treatment given. According to the criteria, if the significance value is < 0.05 , it means that H_0 is rejected, and H_a is accepted.

5. Recommendations

Based on the above conclusions, the following recommendations can be suggested:

The research findings indicate an improvement in social-emotional skills, suggesting that it should be considered and implemented in learning to enhance other skills.

Educators should apply the relay ball method to improve children's social-emotional competence.

School principals should motivate teachers to have enthusiasm in implementing various meaningful learning methods and provide opportunities for teachers to develop themselves through various self-development activities.

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References

- [1] Efendi, dkk, Pengembangan Permainan Ular Naga Modifikasi Dengan Metode Bermain Untuk Meningkatkan Kemampuan Sosial Emosional Anak Usia 5-6 Tahun. Vol.5 No. 2, 2023 online. Diakses 2 Juni 2023. <https://journal.universitaspahlawan.ac.id/index.php/jpdk/article/view/14583/11319>
- [2] Sofyan A. Rosdianti. Permainan Estafet Bendera Untuk Mengembangkan Sosial Emosional Anak Di TK Mawaddah Warahmah Aceh Besar. Vol. 6 No 2. 2023. Online. Diakses 1 Juni 2023. <http://jurnal.unsyiah.ac.id/suloh>
- [3] Tangse D. Permainan Estafet untuk Meningkatkan Kemampuan Motorik Kasar Anak Usia 5-6 Tahun. Vol.6 Issue1, 2021. Online. Diakses 1 Juni 2021 <https://obsesi.or.id/index.php/obsesi/article/view/1166/pdf>
- [4] Putri M. Meningkatkan Kemampuan Sosial Emosional Anak Melalui Permainan Outbound Low Impact (Sederhana) Pada Kelompok B PAUD Melati Tahun Ajaran 2020/2021, 2023. Online. Diakses 2 Juni 2023. <https://jurnalrinjanipendidikan.com/index.php/JR-PAUD/article/view/34/62>
- [5] Sugiyono. 2019. Metode Penelitian Kuantitatif, Kualitatif, dan R&D. Bandung: Alfabet
- [6] Rahmi A. Rika. Permainan Estafet Bendera Untuk Mengembangkan Sosial. Jurnal Bimbingan Konseling. Vol 6 No 2, 2021 Online. Diakses 19 Oktober 2023. <https://jurnal.usk.ac.id/suloh/article/view/25248/15536>

- [7] Dewi dan Yuli. Pengaruh Kegiatan Out Door Estafet Air Terhadap Perkembangan Sosial Emosional Anak Usia 4-6 Tahun, 2018 Online. Diakses 19 Oktober 2023. <https://core.ac.uk/download/pdf/234799375.pdf>
- [8] Yunita dan Nefi. Penerapan Permainan Estafet Bola Kertas Dalam Menstimulasi Perkembangan Sosial Emosional Anak di RA. *Journal of Basic Educational Studies* Vol 3 No 2, ISSN 2774-5058. 2023. Online. Diakses 19 Oktober 2023