

The Effect of Diamond Passing and Rondo Games on The Passing Accuracy of Football Games of Students of SMA Negeri 1 Demak

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Abstract

Physical education plays a role in improving physical fitness, motor skills, understanding, and healthy and active lifestyles, including through sports activities such as soccer. However, learning that focuses too much on technical aspects can cause students to have difficulty understanding the meaning of the game, thus decreasing their interest in learning. One of the most important basic techniques in soccer is passing, especially related to its accuracy level. Passing accuracy plays a role in determining the accuracy of passes given to teammates. Good passing will result in passes that are on target, while poor passing tends to result in inaccurate passes. Thus, the level of passing accuracy is a major concern, because frequent inaccuracies can hinder the effectiveness of training programs and diamond and rondo training is one solution. This study aims to determine the effect of diamond and rondo passing training on the accuracy of soccer passing of class X students of SMAN 1 Demak. The subjects of this study were 36 students. This research method used a quasi-experimental design with a pretest and posttest of two groups, where all players were divided into 2 groups, namely the first group was given treatment with the diamond passing training model and the second group was given treatment with the rondo training model without using a control group. This research instrument uses short passing. Based on the results of the study, the effect of the diamond passing training model on the passing accuracy of students at SMAN 1 Demak obtained a percentage increase of 42.85% with an average pretest score of 108.33 and an average posttest score of 233.33. While the effect of the rondo training model on the passing accuracy of students at SMAN 1 Demak obtained a percentage increase of 27.77% with an average pretest score of 100 and an average posttest score of 169.44. The conclusion that can be conveyed by the author from the results of this study is that the diamond passing training model has a more significant influence than the rondo training model on the passing accuracy of students at SMAN 1 Demak in 2026.

Keywords: diamond; rondo games; passing; football; high school students

1. Introduction

Physical education aims to improve physical health, movement skills, understanding, and healthy and active lifestyles, including sports such as soccer. This provides students with greater access to a wide range of movement and richer, more varied learning experiences tailored to their needs and curriculum (Agustan & Hidayat, 2021). Physical Education not only teaches knowledge but also skills. This subject is essential for meeting students' movement needs through enjoyable learning experiences (Sukardi, 2022). However, if there is too much emphasis on the technical approach, students may have difficulty understanding the meaning of the game and become less interested in learning (Pratama et al., 2018). Therefore, teachers need to package learning in a fun way so students don't get bored. Through Physical Education (PJOK), students can participate, develop

physical talents, and improve their health, lifestyle, social skills, and mental well-being. One of the topics covered in large ball games is soccer. (Marpaung et al., 2025). Football playing skills are also related to tactical or intelligence aspects (Andika et al., 2020). Football is a two-team game where the goal is to score goals against the opposing team within 90 minutes. To play well, mastering various techniques is essential, as they significantly impact the smoothness of the game (Gemael et al., 2020). Football is one of the most popular sports among the world's population, including in Indonesia (Kismono & Dewi, 2021). Passing accuracy plays a crucial role in the game because it determines the accuracy of the pass. Good passing results in on-target passes, while poor passing results in inaccurate passes (Burcak, 2015). Passing accuracy is a concern in this case. Inaccurate and frequently incorrect passes will certainly make the training program less than optimal (Putra et al., 2020). The influence of varying training on passing accuracy has been widely discussed in sports literature, such as the influence of varying passing training in fixed and changing positions (Nugroho, 2011). However, most of the research is more focused on SSB players or extracurriculars at school (Fahrevi et al., 2022).

This gap becomes increasingly relevant when linked to the factual conditions in the field from the results of observations and interviews with teachers of SMAN 1 Demak conducted by researchers, researchers found the problem of the level of accuracy of passing owned by students is not good, and from the results of interviews with teachers stated "the level of accuracy of passing is not good students can be seen when learning using a full field many passes are inaccurate and often make it difficult for teammates to control the ball". In learning the teacher applies pair passing exercises aimed at improving the accuracy of passing students of SMAN 1 Demak.

The novelty of this research lies in the influence of diamond passing and rondo games on the research subjects of students at SMAN 1 Demak. Thus, this research is expected to enrich the treasury of sports education science, especially in the development of school sports game models (Aguss & Fahrizqi, 2020). Based on these conditions, the researcher assumes that there is a need for new training variations to improve the passing accuracy of students at SMAN 1 Demak. Researchers want to apply the diamond passing and rondo games training model to improve students' passing accuracy.

Based on the problem identification, research gaps, practical urgency, and novelty aspects, the purpose of this study is to determine and analyze the effect of diamond games and rondo games on passing accuracy in students at SMAN 1 Demak. The results are expected to provide theoretical contributions to the field of sports science and practical insights for teachers and extracurricular coaches in designing more effective and measurable training programs.

2. Method

The research method used in this study is a quasi-experimental one. A quasi-experimental is a research method used to determine the effect of certain treatments on others under conditions that do not allow researchers to fully control the variables (D. Sugiyono, 2013). The design used in experimental research uses a "two-group pretest-posttest design" with or without a control group (Izzad et al., 2024). The subjects used were class X students of SMAN 1 Demak. Sampling was conducted using purposive sampling technique based on certain criteria deemed to meet the criteria by the researcher (Iba & Wardhana, 2024) obtained by 36 students. All samples underwent an initial test or pretest of dribbling ability to determine the treatment group in the study

(Ramadhani & Sudarmono, 2020). After conducting the pretest, the next step is to arrange the samples using rankings according to the pretest results, then pair them or group them using the A-B-B-A pattern which produces 2 groups, namely group A and group B. The sample division technique used in this study is the ordinal pairing technique, namely the technique of dividing the group into two teams or groups that have equal and even abilities (F. X. Sugiyono, 2017). The variables in this study consist of two independent variables, namely diamond passing and rondo games, and one dependent variable, namely passing accuracy. Hypothesis testing in this study uses a T-test or difference test. The T-test in this study uses a paired sample T-test. The paired samples t-test or paired sample test aims to test the difference in the average of two groups of data or paired samples (Izzad et al., 2024).

Table 1. Categorization formula

Rumus	Category
$X \geq (Mi + 1,5 SDi)$	Very Good
$(Mi + 0,5 SDi) \leq X < (Mi + 1,5 SDi)$	Good
$(Mi - 0,5 SDi) \leq X < (Mi + 0,5 SDi)$	Fair
$(Mi - 1,5 SDi) \leq X < (Mi - 0,5 SDi)$	Poor
$(Mi - 1,5 SDi) \geq X$	Very Poor

Source: (Nugroho, 2017)

3. Result

Descriptive

Table 2. Test descriptive

Group	N	Min	Max	Mean	Std. deviation
Pretest diamond passing	18	0	400	108,33	95,871
posttest diamond passing	18	100	400	233,33	76,696
Pretest rondo games	18	0	300	100	78,591
Posttest rondo games	18	50	350	169,44	78,850

The results of the study are explained using descriptive analysis as follows: Descriptive statistical data shows that the diamond passing group had an average score before and after of 108.33 and 233.33 with a percentage increase of 42.85%, while the rondo games group had an average score before and after of 100 and 169.44 with an increase of 27.77%, indicating a significant difference between the two methods. However, on average, diamond passing training was superior in improving passing ability.

Test data prerequisite

Normality

A normality test was conducted to determine the appropriate method for answering the research hypothesis. In this study, the Sapiro-Wilk test was used for normality testing because the sample size was less than 50. The decision guideline is that if the significance value is >0.05 , then the data

is normally distributed. The results of the normality test for the pretest and posttest data for the diamond passing and rondo games groups are as follows.

Table 3. Test normality

Group	Value Sig. (p-value)	Information
<i>Pretest diamond passing</i>	.008	Berdistribusi Normal
<i>Posttest diamond passing</i>	.274	Berdistribusi Normal
<i>Pretest rondo games</i>	.069	Berdistribusi Normal
<i>Posttest rondo games</i>	.276	Berdistribusi Normal

Based on the information presented in the previous table, it can be seen that the p-value (Sig.) for the pretest and posttest data is greater than 0.05, indicating that the variables follow a normal distribution. Since all data follow a normal distribution, further analysis can be continued.

Homogeneity

Table 4. Test homogeneity

Research variables	Value sig. (p-value)	Information
<i>Pretest</i>	.587	Homogen
<i>Posttest</i>	.938	Homogen

From the table above, it can be seen that all p-values of significance (sig. p) are greater than 0.05, indicating that the data is homogeneous. Because the data is homogeneous, data analysis can be continued with statistics.

Test Hypothesis

Hypothesis 1

Table 5. T test diamond passing

Group	Mean	T-test for Equality of means	
		t count	Sig.(2-tailed)
Pretest	108,33	6,708	0,00
Posttest	233,33		

The results of the hypothesis test on diamond passing exercises have a t-value of 6.780 and a t-table of 2.110 with a significance value (2-tailed) of 0.00. Based on these data, it means that t-value $6.780 > t\text{-table } 2.110$ and a significance value of $0.00 < 0.05$ indicates that there is an effect of diamond passing exercises on passing accuracy in students of SMAN 1 Demak.

Hypothesis 2

Table 6. T test Rondo games

Group	Mean	T-test for Equality of means	
		t count	Sig.(2-tailed)
Pretest	100	4,931	0,00
Posttest	169,44		

The results of the hypothesis test on the rondo games practice have a t-value of 4.931 and a t-table of 2.110 with a significance value (2-tailed) of 0.00. Based on these data, it means that the t-value of $4.931 > t\text{-table of } 2.110$ and the significance value of $0.00 < 0.05$ indicates that there is an effect of rondo games practice on passing accuracy in students of SMAN 1 Demak.

Hypothesis 3

Tabel 7. T test posttest diamond passing dan rondo games

Group	Average	T-test for Equality of means				
		t ht	t tb	Sig	difference	%
Posttest Diamond passing	233,33	2,464	2,032	.019	63,89	42,85%
Posttest rondo games	169,44					27,77%

From the t-test results table above, it can be seen that the calculated t value is 2.464 and the t table value (df = 34) is 2.032 while the significance level p is 0.019. Since the calculated t value of 2.464 is greater than the t table value of 2.032 and the significance level of 0.019 is less than 0.05, it can be concluded that the significance level (2-tailed) obtained for the variable is 0.019, which is a value greater than 0.05. This indicates that H_0 is rejected and H_1 is accepted. Thus, it can be stated that both diamond passing and rondo games have an effect. However, the researcher concluded that there is a significant difference in influence between the diamond passing and rondo games game methods.

Based on the analysis results, the average posttest score for the diamond passing group was 233.33 with a percentage increase of 42.85%, while the average posttest score for the rondo games group was 169.44 with a percentage increase of 27.77%, as seen from the difference in post-test scores of 63.89. Thus, the hypothesis stating "There is a difference in the influence between diamond passing and rondo games on the accuracy of passing in soccer games for students of SMAN 1 Demak" is accepted. The diamond passing game group showed better results than the rondo games group regarding the accuracy of passing in soccer games for students of SMAN 1 Demak.

4. Discussion

This research was conducted with the aim of improving passing accuracy using a pre-designed training program. The training program consisted of diamond passing and rondo games, with 12 sessions, each with a different program. Meetings were held three times a week. At each training session, players were required to consistently follow the training materials provided, with the goal of maximizing the results of the training materials and achieving the desired results (Prayuda &

Firmansyah, 2017). It can be concluded that the Diamond training program has a positive impact and influence on students' passing accuracy during matches. Therefore, this training program is highly recommended to improve these playing skills with appropriate training portions. Training is the process of carrying out sports activities that have been systematically and structured over a long period of time to improve motor skills, both physically, technically, tactically, and mentally, to support the success of students or athletes in achieving maximum sporting achievements (Rifan et al., 2023). Overall, it can be concluded that diamond passing drills are more effective in improving average passing accuracy in soccer, while rondo games are more likely to improve quick thinking. However, the decision regarding which drill is more effective may depend on the desired goal (Sari, 2014). Both methods complement each other, with diamond passing training in accuracy of passing the ball and rondo games excelling in ball control (Sepakbola, 2023).

This study aims to analyze the effect of diamond passing and rondo games on soccer passing skills in students of SMAN 1 Demak. Based on data analysis, researchers found that the study sample showed a significant increase. In soccer learning, students of SMAN 1 Demak showed an increase in passing skills as a result of training interventions given for 12 sessions with a frequency of three times a week. The results of data analysis using the paired sample t-test showed that students of SMAN 1 Demak showed a significant difference in passing skills before and after receiving diamond passing and rondo games training interventions. This increase in average scores indicates that diamond passing and rondo games training really improves passing skills. Both methods can significantly improve passing skills, with a significance level of $p < 0.05$. According to the results of statistical analysis using the independent sample t-test specifically, researchers found that the group using diamond passing training got better results than the group using rondo games training.

5. Conclusion and Recommendation

Based on the results of research on the effect of diamond passing and rondo games on the accuracy of passing in soccer games for students of SMAN 1 Demak, it can be concluded that diamond passing and rondo games have a significant effect on passing accuracy, diamond passing exercises are carried out to improve control, passing accuracy and passing accuracy. The advantage of this diamond passing is that it is easy to do and easy to understand how to do it. This passing exercise can also improve passing support between players in carrying out attacks on the opponent's goal (Manik & Putra Tarigan, 2022). These findings align with research showing significant improvement after diamond passing training. Meanwhile, rondo games have benefits for passing, control, and first touch, and they also train quick decision-making. (Hasyim & Syafii, 2022) sesuai dengan hasil penelitian adanya perubahan setelah dilakukan latihan *rondo games*.

Based on the research conducted at SMAN 1 Demak, it is recommended that this program be implemented and designed with greater variety in teaching and extracurricular activities, with greater programmatic and higher intensity. For further research, it is recommended to increase the sample size and include other variables, such as physical condition, to obtain a more comprehensive picture of the factors influencing passing accuracy.

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