

The Effect Method of Part and Whole Training on Basic Inner Foot Passing the U-15 Elang Timur Youth Football Team in Semarang

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Abstract

This study aims to compare the effects of the Part and Whole training methods on basic technical skills in passing with the inside of the foot among young soccer players at the Elang Timur U-15 Youth Football in Semarang. The study was motivated by the players' poor passing skills using the inside of the foot during matches and their boredom with conventional training methods. This study employed an experimental design with pre-test and post-test measurements, involving two groups, each undergoing training using the Part and Whole methods for 16 sessions with pre-tests and post-tests. This study used a two-group pretest-posttest design. Based on data analysis, the researcher found that the U-15 Elang Timur SSB players from Semarang City demonstrated better basic inside-foot passing skills when using the Part and Whole training methods. Both methods significantly improved passing ability, with a significance level of $p < 0.05$. Using a Paired Sample T-Test, the researcher found that the group using the Part method performed better than the group using the Whole method, although this difference was not statistically significant, with a 21.62% improvement using the Part method and a 19.65% improvement using the Whole method.

Keywords: part training method; whole training method; inside foot passing; football

1. Introduction

Law Number 11 of 2022 concerning Sports is a comprehensive regulation governing the organization of sports in Indonesia. This regulation focuses on sports development from an early age, improving athlete performance, and fostering participation from the government, the private sector, and the community (Undang-undang, 2022). Football was introduced to Indonesia by the Dutch colonialists. Initially, the game was played only by Dutch citizens, especially those living in large cities with significant Dutch populations. However, over time, the sport began to be adopted by educated Indonesians in large cities and then spread to smaller urban areas (Farhan et al., 2024). The most important factor in achieving success in the world of soccer is mastering the basic skills. To play soccer well, you must understand the basic techniques of the game (Adi et al., 2023). These basic techniques include passing, ball control, dribbling, and shooting. One of the essential skills in soccer is passing (Nurcahyo et al., 2026). Passing is an integral part of ball-kicking technique. The ability to kick the ball is a skill that every soccer player must master, because, as its name implies, kicking the ball is used to pass it to teammates from various distances (Utomo & Indarto, 2021). One training approach that can be used is the parts-and-whole method (Aryanto, 2021). The part method is a training method that breaks a movement down into small components to be practiced separately. The whole method teaches the movement as a whole so that players can

understand the complete sequence of movements and how to apply them in actual game situations (Fauzi, 2022). In passing drills, the use of the “Part and Whole” method is essential for improving understanding of basic techniques such as the position of the supporting foot, the part of the foot used to kick, the direction of gaze, and ball control after making a pass (Fauzi, 2022). One study titled “A Comparison of the Part and Whole Training Methods and the Drill Method on Soccer Passing Ability” was conducted by Putra in 2022. This study aims to examine the comparative effectiveness of the part-and-whole training method versus the drill training method in improving passing skills in soccer. The conclusion is that the part-and-whole technique is not significantly more effective than the drill technique in improving passing ability (Putra et al., 2022). The novelty of this study lies in the focus on the influence of the Part and Whole Training Method on the Basic Inside-Foot Passing Skills of the U-15 Elang Timur SSB in Semarang City. The results of this study are expected to contribute to sports science theory and provide useful contributions for coaches and extracurricular activity managers in designing more efficient and measurable training programs.

2. Method

The research design used was a “two-group pretest-posttest design,” which is a research approach involving a pre-intervention measurement and a post-intervention measurement, thereby allowing for more accurate information because it enables comparison with pre-intervention conditions (Almeqdad et al., 2023). The research subjects were all 30 players on the SSB Elang Timur U15 team. According to Sugiyono, a census sample is defined as “a sampling method that involves all individuals in the population from which the sample is drawn. This technique is often applied when the population is small that is, fewer than 30 individuals or when the researcher wishes to make generalizations with a very minimal margin of error.” Another term for saturated sampling is a census, in which all elements of the population are used as the sample (Sugiyono, 2021). The collected data were then analyzed using descriptive statistics and hypothesis testing via the Paired Test. Before hypothesis testing is conducted, prerequisite tests are performed first, including a normality test using the Shapiro-Wilk test, considering a sample size of 30 (fewer than 50 respondents) (de Souza et al., 2023).

Assessment Tool: Part and Whole

This test is not conducted as a trial run; participants immediately perform the low-pass test, consisting of ten kicks. A kick is considered valid and counts as a goal if the ball hits the target area, touches the upper boundary, and/or hits the goalpost, and the power of the kick must reach the boundary line from the opposite direction (a distance of 9 meters). The score is based on the number of valid kicks out of the total of ten kicks taken. Data collection for this study involved a pretest and posttest, followed by part-and-whole exercises over a period of one and a half months, conducted three times a week.

Tabel 1. Data collection techniques

Kick on Target Category	
1-2	Very Bad
3-4	Bad
5-6	Fair
7-8	Good

Kick on Target Category

9-10 Very Good

(Sumber : Subagyo Irianto, 2000:)

All measurements were conducted in the field using the same procedures to ensure consistent results. Before the tests began, participants were given instructions and time to warm up to reduce the risk of injury and ensure optimal performance during data collection. Each test was conducted individually under the supervision of the researcher and assistants to ensure objectivity in scoring.

3. Result

Descriptive

Table 2. Descriptive statistic

Research Variables	N	Min	Max	Mean	Std. Deviation
Pretest Part	15	3	7	4.93	1.100
Posttest Part	15	3	9	6.00	1.813
Pretest Whole	15	2	7	4.88	1.232
Posttest Whole	15	3	9	5.80	1.320

The results of the study are described using descriptive analysis as follows, Descriptive statistical data show that the Part practice group had a mean post-test score of 6.00 with a percentage increase of 21.62%, while the Whole group had a mean of 5.80 with an increase of 19.17%, indicating no significant difference between the two methods. Nevertheless, on average, the Part exercise was slightly superior in improving inside-foot passing ability.

Prerequisite Test Normality

Tabel 3. Normality test

Group	Nilai Sig. (p-value)	Information
Pretest Part	.218	Berdistribusi Normal
Posttest Part	.507	Berdistribusi Normal
Pretest Whole	.787	Berdistribusi Normal
Posttest Whole	.129	Berdistribusi Normal

Based on the information presented in the table above, the Shapiro-Wilk normality test shows that the p-value (Sig.) for the pre-test and post-test data from all groups is greater than 0.05, indicating that these variables follow a normal distribution. Since all data follow a normal distribution, the analysis can proceed.

Homogeneity

Tabel 4. Homogeneity test

Variabel Penelitian	Nilai Sig. (p-value)	Keterangan
Pretest	.797	Homogen
Posttest	.179	Homogen

From the table above, it can be seen that all sig. p values are > 0.05 , indicating that the data pretest and posttest is homogeneous. Because the data is homogeneous, data analysis can be continued with statistics.

Paired Sample T-Testing

Hypotesis 1

Tabel 5. Hypothesis test 1

Group	Average	T-test for Equality of means	
		t ht	Sig.(2-tailed)
Pretest	4.93	2.779	0,015
Posttest	6.00		

Based on the results of the analysis shown in Table 6, it is evident that the asymptotic significance value (two-tailed) obtained for the variable is $0.015 < 0.05$ ($p < 0.05$), indicating that the null hypothesis (H_0) is rejected and the alternative hypothesis (H_a) is accepted. Thus, it can be concluded that there is a relationship between the type of training using the Part method and a higher level of passing skill.

Hypotesis 2

Tabel 6. Hypothesis test 2

Group	Average	T-test for Equality of means	
		t ht	Sig.(2-tailed)
Pretest	4.88	3.561	0,003
Posttest	5.80		

Based on the results of the analysis shown in Table 6, it is evident that the asymptotic significance value (two-tailed) obtained for the variable is $0.003 < 0.05$ ($p < 0.05$), indicating that the null hypothesis (H_0) is rejected and the alternative hypothesis (H_a) is accepted. Thus, it can be concluded that there is a relationship between the type of training using the whole-body method and a higher level of passing skill.

Hypotesis 3

Tabel 7. Hypothesis Test 3

Group	Average	T-test for Equality of means				
		t ht	t tb	Sig	Selisih	%
Posttest part	6.00	.315	1.14	.757	0.20	21.62%
Posttest whole	5.80					19.17%

From the t-test results table above, it can be seen that the calculated t-value is 0.315 and the critical t-value ($df = 28$) is 1.14, while the significance level p is 0.757. Since the calculated t-value of 0.315 is less than the critical t-value of 1.14 and the significance level of 0.757 is greater than 0.05, it can be concluded that the asymptotic significance level (two-tailed) obtained for the variable is 0.757, which is a value greater than 0.05. This indicates that H_0 is accepted and H_1 is rejected. Thus, it can be stated that both the Part and Whole training methods have an effect. However, the researcher concludes that there is no significant difference in effect between the Part and Whole training methods.

Based on the analysis results, the post-test mean score for the Part training group was 6.00 with a percentage increase of 21.62%, while the post-test mean score for the Whole training group was 5.80 with a percentage increase of 19.17%, as seen from the post-test score difference of 0.20. Thus, the hypothesis stating “There is a Difference in Effect between the Part method and the Whole method on the basic technical ability of inside-foot passing among U15 Elang Timur SSB players in Semarang City” is accepted. Therefore, the Part training group performed better than the Whole training group regarding the basic technical ability of inside-foot passing among U15 Elang Timur SSB players in Semarang City.

4. Discussion

In theory, passing is a fundamental skill in soccer that allows the ball to be moved from one player to another on the same team. In theory, passing is a fundamental skill in soccer that allows the ball to be moved from one player to another on the same team (Zhou et al., 2023). One relatively effective method for improving passing skills is the whole-practice and part-practice method. The whole-practice method fosters a synchronized motor learning approach to the use of basic techniques (Pradipta, 2022). The part method is a training method that breaks a movement down into small parts to be practiced separately (Maudrich et al., 2022). This method is effective for complex techniques that require a deep understanding of movement. The Whole Method teaches movements as a whole, allowing players to grasp the complete sequence of movements and their application in real-game situations. The combination of these two methods is believed to yield better training results because players learn from the most basic elements and progress toward complete movements (Aviani, 2024). Combining these two methods is believed to yield better training results because players progress from the most basic elements to full movements (Santoso et al., 2024). In passing drills, the use of the “Part and Whole” method is essential for improving understanding of basic techniques such as the position of the supporting foot, the part of the foot used to kick, the direction of gaze, and ball control after making a pass (McCaskie et al., 2022). In addition, this method can help coaches tailor the difficulty level of drills to the players’ abilities, making the process of improving technique easier to measure and more effective (Kurniawan, 2025).

This study aims to analyze the effect of the Part and Whole Training Method on basic inside-of-the-foot passing skills among the U-15 Elang Timur SSB team in Semarang. Based on data analysis, the researchers found that the study sample showed significant improvement. In soccer matches, the athletes of the Elang Timur U-15 SSB demonstrated improved passing ability using the inside of the foot as a result of the training intervention administered over 16 sessions at a frequency of three times per week. The results of the data analysis using the Paired Sample T-Test indicated that the athletes of the Elang Timur U-15 SSB exhibited a significant difference in passing ability before and after receiving the Part and Whole training intervention. This increase in the mean score indicates that Part and Whole training truly improves passing ability using the inside of the foot. Both methods can significantly improve passing ability, with a significance level of $p < 0.05$, according to statistical analysis results, such as the Paired Sample T-Test. Specifically, the researchers found that the group using the Part method performed better than the group using the Whole method, although this difference was not always statistically significant

5. Conclusion and Recommendation

Based on data analysis, the researchers found that the U-15 Elang Timur SSB players from Semarang City demonstrated better basic technical skills in inside-of-the-foot passing when using the Part and Whole training methods. Both methods significantly improved passing ability, with a significance level of $p < 0.05$, according to statistical analysis results, such as the Paired Sample T-Test. Specifically, the researchers found that the group using the Part method performed better than the group using the Whole method, although this difference was not always statistically significant. However, the combination of Part and Whole training produced better results in terms of improving the technical aspects, accuracy, and effectiveness of passing in game situations. The Whole method helps players understand the overall flow of movement and apply it in the game, while the Part method teaches proper technical fundamentals, such as foot placement and ball control. Most people believe that combining these two methods can improve overall passing ability, both from a technical perspective and in terms of its application in real-game situations on the field. To ensure the results are more generalizable and applicable to various groups of players, future researchers are encouraged to conduct studies with larger and more diverse samples. Additionally, it is important to examine the impact of supplementary training techniques that can enhance passing skills, such as simulation games and combination drills. Researchers are also advised to conduct long-term studies to determine whether improvements in players' skills persist after training. This is done to ascertain whether such improvements are permanent or not.

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