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The Effect of Tactical Training on Passing Accuracy Among Futsal Extracurricular Participants at SMA Negeri 1 Salem

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Abstract
This study aims to determine the effect of tactical approach training on the ability of passing accuracy in futsal extracurricular participants at SMA Negeri 1 Salem. This research is an experimental research. The population used was futsal extracurricular participants at SMA Negeri 1 Salem, which consisted of 35 students. The sample used in this study was 20 students with a sampling technique that is purposive sampling. Data collection techniques in this study using tests. The instrument used in this study was a modification of the low ball passing test. Data analysis technique using t-test. The results of this study indicate that there is a significant effect of the tactic approach training on passing skills in futsal extracurricular participants at SMA Negeri 1 Salem. When viewed from the pretest average of 6.35 and the posttest average of 7.7, a Mean Difference score of 1.35 is obtained, this indicates a better change of 21.25% compared to before being given the tactical approach training.

Keywords: *Tactical Approach, Passing, Futsal*

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INTRODUCTION

Futsal is a team sport that demands individual skills alongside teamwork. The game requires a range of individual attributes, including technical skills, tactical understanding, physical fitness, and mental readiness (Anbi et al., 2021). Futsal has grown rapidly—particularly in Indonesian junior high schools—as evidenced by the increasing number of facilities available to host annual high-school-level championships (Subakti, 2022). Given the frequency of these competitions, a systematic and well-planned approach to training is essential. A futsal player must be proficient in fundamental techniques such as kicking, controlling, heading, and dribbling the ball (Wiriawan & Irawan, 2019). Therefore, mastering these basic techniques is crucial for every player. Coaches play a significant role in shaping how athletes perform in the sport.

Futsal involves several fundamental techniques that a player must master, such as kicking, controlling, heading, and dribbling the ball. Consequently, every player needs to be

proficient in these basics. Players who have mastered these techniques appear more polished and skilled compared to those with a lower level of technical proficiency. Thus, mastering these fundamental skills is essential for achieving peak performance. A futsal player requires both strong individual technique and excellent physical condition to collaborate effectively with teammates and secure a victory. Modern futsal emphasizes an effective style of play aimed at winning; players do not need to hold onto the ball for too long, but rather utilize passing, dribbling, and shooting to achieve success. Ultimately, the game centers on the objective of scoring goals against the opponent while simultaneously defending one's own goal from conceding.

At SMA Negeri 1 Salem, students' interest and talent in futsal are also nurtured through an extracurricular program. These sessions take place three times a week: Tuesdays, Thursdays, and Saturdays, all from 15:00 to 17:00 WIB. The author also observed the futsal training sessions on the court. Students frequently made fundamental errors when executing passing techniques; common mistakes included passing the ball to opponents, delaying the pass—resulting in the ball being intercepted—failing to pass accurately to teammates, and neglecting to move into open space after passing, which led to poor ball possession.

A well-planned training program enhances both team and individual performance. One fundamental skill crucial to futsal is accurate passing (Fadli et al., 2023). Effective passing can dictate the flow of the game, facilitate the build-up of attacks, and create goal-scoring opportunities (Fadli et al., 2023). Consequently, tactical training focused on improving passing accuracy is essential for futsal players to perform more effectively and efficiently. In futsal, passing involves more than simply transferring the ball to a teammate; it requires precision in direction and appropriate speed, while also taking into account the positions of both opponents and teammates. Players with high passing accuracy find it easier to maintain ball possession and support the team's game strategy (Kurniawan et al., 2023). Therefore, development through systematic tactical training is vital for enhancing a player's passing ability.

Passing accuracy in futsal is a key factor determining a team's success in controlling the game and creating scoring opportunities. Through targeted and systematic tactical training, players can enhance their passing skills, enabling more effective play (Putra et al., 2024). Training methods applicable to tactical drills include partner passing, small-group passing, passing under defensive pressure, passing patterns integrated into game strategies, and target-based passing (Hamison et al., 2019). Continuous evaluation is also essential to ensure that the training yields positive results in improving players' passing accuracy (Faturohman et al., 2024). With appropriate training and a high level of commitment from each player, futsal

passing skills can be continuously improved, thereby supporting both individual and overall team performance. Therefore, this study aims to demonstrate the impact of a tactical training approach on the passing skills of participants in the futsal extracurricular program.

METHOD

The research method employed in this study is the experimental method. Suharsimi Arikunto (2016: 9) states that an experiment is a means of investigating the cause-and-effect relationship between two factors—deliberately induced by the researcher—while eliminating, reducing, or setting aside other confounding factors. The research design employed in this study is the one-group pretest-posttest design, which involves administering a pretest prior to the intervention and a posttest afterward; this allows for greater accuracy by enabling a comparison with the baseline established before the intervention (Sugiyono, 2019:110). The group in this study underwent both a pretest and a posttest and received an intervention consisting of training based on a tactical approach. According to Sugiyono (2019), a population can be defined as a generalization area consisting of subjects possessing specific qualities and characteristics determined by the researcher for study and subsequent conclusion-drawing. The population used in this study consists of 35 students participating in the futsal extracurricular activity at SMA Negeri 1 Salem. According to Sugiyono (2019), a sample is a subset of the population's total size and characteristics. The sample used in this study consisted of 20 students. The sampling technique employed was purposive sampling, which is classified as a non-probability sampling method. According to Sugiyono (2019), purposive sampling is a technique for selecting a sample based on specific criteria. The data collection techniques in this study employed a low-pass test designed by Subagyo Irianto (2018)—with modifications made to the court surface and the futsal ball. The low-ball passing test is conducted using a goal measuring 1.5 meters in width and 0.5 meters in height; the starting position is 9 meters from the goal, with a 1.5-meter-long boundary line marking the starting point. To execute the test, the ball is placed behind the boundary line; the player may take a run-up before kicking the ball toward the target area. A kick is considered valid if the ball strikes the side goalpost (side boundary) or the top crossbar (upper boundary) with sufficient force to reach the boundary line on the opposite side (a distance of 18 meters). A total of 10 kicks are performed.

The variables examined in this study are tactical approach training (independent variable) and ball passing (dependent variable). Data collection was conducted using testing techniques.

Data collection involved 16 treatment sessions. This aligns with the view expressed by Tjaliek Sugiardo (cited in M. Iqbal Aditya, 2018) that a 16-session training process is sufficient to establish a trained state, as it results in lasting changes.The training program consisted of 14 sessions—conducted three times a week—plus pre-test and post-test sessions, totaling 16 meetings. Each treatment session lasted 90 minutes.

According to Suharsimi Arikunto (2017: 203), a research instrument is a tool or facility used by a researcher to collect data, thereby facilitating the work and yielding better results—specifically, results that are more precise, complete, and systematic, and thus easier to process. Tests and measurements were conducted to obtain the data required for this study. The research instrument used to collect data on passing skill levels in this study is a modified version of the low-ball passing test for soccer developed by Subagyo Irianto (cited in Muzaffar & Saputra, 2019, p. 84).

Instrument validity implies that the measurement tool used to obtain data (to measure) is valid; validity means the instrument is capable of measuring what it is intended to measure (Sugiyono, 2017). A trial was conducted at SMAN 2 Brebes involving 10 students. The passing test employed in this study utilized an instrument developed by Subagyo Irianto (cited in Muzaffar & Saputra, 2019,)—with modifications—which had previously been tested and shown to have a validity coefficient of 0.710.

Instrument reliability refers to the quality of an instrument that, when used repeatedly to measure the same object, yields consistent data. A trial was conducted at SMAN 2 Brebes involving ten students. The passing test employed in this study utilized an instrument developed by Subagyo Irianto (cited in Muzaffar & Saputra, 2019)—with modifications—which demonstrated a reliability coefficient of 0.703.

The modified low-pass test (often used as a low-pass test for futsal) is a measurement instrument designed to assess the accuracy of ground passes. This test utilizes a target—such as a scored grid on a wall or goal—to evaluate the precision of a player's kicks or passes. The primary reason for using a modified underhand pass test is to lower the difficulty level, increase focus on movement mechanics, and reduce pain or fear among beginners.

Implementation guidelines:

1) Participants are paired up and positioned facing each other.
2) Participants take turns performing passes starting from a stationary ball; each participant performs 10 passes—5 with the right foot and 5 with the left foot. The distance from the participant to the target is 9 meters, and the distance between the two participants is 18 meters.

3) A pass is considered successful if the ball passes through the goal and reaches the partner positioned opposite; if the ball passes through the goal but does not reach the partner accurately, the pass is declared unsuccessful.

Scoring guidelines

1) Count the number of passes that successfully pass through the goal and reach the partner positioned opposite (without veering off course after passing through the goal). One successful pass counts as one point.

A normality test essentially assesses whether the distribution of the data to be analyzed is normal. The specific test conducted depends on the variables being processed. Normality testing is performed using IBM SPSS version 22 software. The criterion for determining normality is that a distribution is considered normal if $p > 0.005$, whereas it is considered non-normal if $p < 0.005$.

The data analysis technique employed is the t-test, with the null hypothesis (Ho) stating that there is no significant effect of tactical approach training on the passing skills of futsal extracurricular participants at SMA Negeri 1 Salem. The alternative hypothesis (Ha) states that there is a significant effect of tactical approach training on the passing skills of futsal extracurricular participants at SMA Negeri 1 Salem. If the calculated t-value is smaller than the t-table value, Ha is rejected; conversely, if the calculated t-value is greater than the t-table value, Ha is accepted. The hypothesis testing calculation utilizes the t-test formula. Regarding the data analysis technique for hypothesis testing, Anas Sudijono (2015) notes that the comparative hypothesis test for the means of two samples uses the following t-test formula:

$$t_o = \frac{M_D}{SE_{MD}}$$

M_D : Selisih antara skor Variable I dan skor Variable II

SE_{MD} : *Standar Error dari Mean of Difference*.

Hypothesis testing was conducted using a t-test with the aid of SPSS software by comparing the mean scores of the experimental group before and after the treatment. If the calculated t-value is less than the t-table value, the alternative hypothesis (Ha) is rejected; if the calculated t-value is greater than the t-table value, Ha is accepted. The results pertain to the accuracy of flat passes in futsal.

RESULTS AND DISCUSSION

Results

The research results are described using descriptive statistical analysis as follows: mean = 6.35, median = 6, mode = 6, standard deviation = 1.08, range = 3, minimum value = 5, and maximum value = 8.

Table 1. Interval *Pretest Passing*

No	Value	Frequency	Percentage (%)
1	5	5	25%
2	6	7	35%
3	7	4	20%
4	8	4	20%
	Amount	20	100%

The research results can be described using descriptive statistical analysis as follows: mean = 7.7, median = 8, mode = 7, standard deviation = 1.08, range = 3, minimum value = 6, and maximum value = 9.

Table 2. Interval *Posttest Passing*

No	Value	Frequency	Percentage (%)
1	6	3	15%
2	7	6	30%
3	8	5	25%
4	9	6	30%
	Amount	20	100%

Prerequisite Test Results

Prior to statistical analysis, assumption tests—specifically tests for normality and homogeneity—are conducted. The normality test is used to determine whether the distribution of the obtained data is normal, while the homogeneity test is used to determine whether the research sample originates from a homogeneous population.

Normality Test

Normality testing is conducted using the Kolmogorov-Smirnov test. This test evaluates the hypothesis that the sample originates from a normally distributed population by comparing the Asymp. Sig. value with 0.05. The criterion is to accept the hypothesis if the Asymp. Sig. value is greater than 0.05; otherwise, the hypothesis is rejected.

Tabel 3. Normality Test Result

No	Variable	*Asymp.Sig*	Conclusion
1	Pretest of Passing Accuracy	0,259	Normal
2	Posttest of Passing Accuracy	0.456	Normal

Based on the table above, the Asymp. Sig. values for all variables are greater than 0.05; therefore, the hypothesis stating that the samples are drawn from a normally distributed population is accepted. Given this, the variable data in this study can be analyzed using a parametric statistical approach.

Homogeneity Test

This test evaluates the hypothesis that the variances of the variables are equal; the hypothesis is accepted or rejected by comparing the significance value against a threshold of 0.05. The results of the homogeneity test are presented in the table below:

Table 4. Test of Homogenity

Variable	Significance Value	Significance Level	Conclusion
Passing Accuracy Ability	0,952	0,005	Homogen

The calculations yielded a significance value greater than 0.05, indicating that the sample variances are homogeneous; thus, the hypothesis stating that the variances of the variables are equal is accepted. Consequently, it can be concluded that the population variances are homogeneous.

Hypothesis Testing (Paired Sample t-Test)

To determine whether or not tactical approach training influences passing accuracy skills among futsal extracurricular participants at SMA Negeri 1 Salem, a t-test was conducted. The results of the t-test are summarized in the following table:

Table 5. Paired Sample t-Test Results

	t-test for equality of Means			
	T count	***T-table***	***Sig. (2tailed)***	***Mean Difference***
Passing Accuracy Ability	10,283	2,09	0,000	1,35

Based on the t-test results, the calculated t-value of 10.283 exceeds the t-table value of 2.09, and the significance probability (0.000) is less than 0.05; consequently, the null hypothesis (Ho) is rejected and the alternative hypothesis (Ha) is accepted. This indicates that tactical approach training influences the passing skills of futsal extracurricular participants at

SMA Negeri 1 Salem. Comparing the pre-test mean of 6.35 with the post-test mean of 7.7 yields a mean difference of 1.35, demonstrating that tactical approach training resulted in a 21.25% improvement in passing skills compared to the level prior to the training.

Discussion

The research findings indicate that futsal training utilizing a tactical approach positively contributes to improving the passing accuracy of students participating in the futsal extracurricular program at SMA Negeri 1 Salem. Training based on a tactical approach resulted in enhanced passing accuracy. This serves as a benchmark for the success of the training program implemented by the coach for the participating students. Training serves as a means to enhance and improve the futsal skills of extracurricular participants. Through structured and regular training, students can identify their individual needs and areas for improvement, thereby using training as a vehicle to develop their abilities. Training sessions can be conducted under a coach's guidance or through independent practice; however, coaching instruction allows students to understand the specific requirements that must be met, ensuring the training is well-structured.

The success of extracurricular activities relies heavily on the role of coaches or teachers in guiding students effectively through training sessions. Coaches must balance collective playing abilities while addressing the diverse needs of individual students and working toward shared goals. These varying needs require coaches to design training sessions that facilitate skill improvement for all students without disadvantaging any individual. Monotonous training routines can lead to student boredom; therefore, sessions should be structured to create an enjoyable atmosphere focused on achieving common objectives. While coaches often employ specific training methods to deliver instruction, these approaches do not always create the engaging environment needed to motivate students to improve their fundamental technical skills. Research findings indicate that a tactical approach can enhance basic skills—specifically, passing ability.

According to Soni Nopembri et al. (2020), the Teaching Games for Understanding model (a tactical approach to instruction) is a teaching method that fosters the development of tactical understanding alongside skill acquisition, thereby enhancing the player's gameplay, comprehension, and enjoyment of the game. Specifically, this tactical approach comprehensively helps students improve their playing abilities. The instructional design encourages students to develop their thinking processes during actual gameplay. Employing game tactics requires students to make quick decisions and possess solid fundamental

techniques to support the tactics being implemented; effective tactical execution relies on the simultaneous application of strong fundamental skills. As training progresses under this tactical approach, students are challenged to refine their fundamental skills and execute movements that are unpredictable to opponents, making it easier to score goals. Furthermore, this approach requires students to execute accurate passes, which is essential for successfully carrying out attacking tactics.

Without realizing it, students are guided through exercises that alleviate boredom while preserving the essential learning objectives. This tactical approach involves systematic training with progressively increasing intensity. This aligns with the view of Santoso Giriwijoyo et al. (2021), who define training as a systematic, repetitive process in which the training load gradually increases over time. Instead of merely practicing in a standard game format, students engage in direct game applications that focus on specific tactics. Consequently, the type of passing employed is adapted to situational needs, moving beyond passing in a vacuum devoid of opponents or obstacles. The presence of obstacles compels students to think critically about the gameplay strategy they are executing. The game patterns demonstrated require students to vary their movements and basic techniques according to the situation; thus, the tactical approach enables them to effectively apply their skills during attacks.

According to Sukadiyanto and Dangsina (2019), the general goal of training is to equip instructors, coaches, and physical education teachers with the conceptual understanding and practical skills needed to unlock students' potential. This tactical approach facilitates the application of students' existing basic technical skills. Beyond the shared goal of student development, it allows teachers or coaches to implement highly effective instructional methods, thereby minimizing the boredom and dissatisfaction often experienced by students. Ultimately, this leads to improved mastery of basic techniques.

The observed improvement in passing proficiency stems from the frequent execution of passing techniques throughout the 16-session training program. This progress is evident in the tactical training curriculum implemented over these sessions. Significant improvement in basic techniques translates to a higher level of overall futsal proficiency. Furthermore, students become capable of playing the game by effectively implementing optimal strategies and tactics. This is because relying solely on basic techniques is insufficient to overcome an opponent who possesses comparable skills; instead, game strategies and tactics prove more effective for securing a win.

CONCLUSION

Based on the research results obtained through data analysis and hypothesis testing, it can be concluded that tactical approach training has a significant effect on the passing accuracy skills of futsal extracurricular participants at SMA Negeri 1 Salem. Comparing the pre-test mean of 6.35 with the post-test mean of 7.7 yields a mean difference of 1.35; this indicates that tactical approach training resulted in a 21.25% improvement in passing skills compared to the level prior to the training.

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