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The Influence of Training Using Audio Visual and Image Media in Futsal Extracurricular Activities at SMAN 4 Tanjungpinang

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Abstract
This study investigates the effectiveness of training using audio visual and image media in improving shooting skills using the inside of the foot in extracurricular futsal games at SMAN 4 Tanjungpinang. Many students lack understanding of the correct techniques for kicking, especially in penalty situations. One contributing factor is the monotonous and less varied training methods used during extracurricular sessions. This research adopts a quantitative approach with a pretest-posttest group design. The sample consisted of 30 students divided into two equal groups: one trained using audio visual media, and the other with image media. Each group received specific training focused on shooting with the inside of the foot. Pretest and posttest assessments were conducted to measure shooting performance. The results showed that: (1) there was a significant effect of training using audio visual media on shooting results, with a significance value of 0.000 (< 0.05), indicating Ho is rejected; (2) training using image media also had a significant effect on shooting results, with a significance value of 0.000 (< 0.05), indicating Ho is rejected; and (3) there was no significant difference in effectiveness between the two media, with an Independent Sample Test significance value of 0.447 (> 0.05), indicating Ho is accepted. The study concludes that both audio visual and image media are effective in improving shooting skills using the inside of the foot, although neither method proved significantly superior.

INTRODUCTION

Futsal is a sport that emphasizes speed, technique, and tactical awareness in a confined space. One of the most crucial technical skills in futsal is shooting, which plays a key role in determining

the outcome of the game. Mastery of the shooting technique, particularly using the inside of the foot, is essential as it provides better control and accuracy when directing the ball toward the goal (Luxbacher, 2014). However, observations at SMAN 4 Tanjungpinang revealed that many students still struggle with executing effective shooting techniques during futsal extracurricular activities, particularly in situations such as penalty kicks. This issue indicates a gap in the effectiveness of the training methods currently applied.

Traditional training approaches that lack variation and rely heavily on verbal explanation or repetitive drills may lead to decreased student motivation and suboptimal skill acquisition. To address this, educators and coaches must consider incorporating instructional media that can enhance the learning process and improve student performance. According to Arsyad (2014), the use of media in teaching can help present information more clearly, allowing students to better understand and internalize motor skills. Therefore, the integration of audio-visual and image-based media in futsal training is expected to improve the quality of instruction and provide a more engaging learning experience.

Audio-visual media, such as instructional videos, can illustrate the correct techniques and provide repeated exposure to ideal movement patterns. This form of media has been shown to be effective in motor learning, as it allows students to observe, imitate, and understand the timing, coordination, and mechanics of specific skills (Magill & Anderson, 2017). On the other hand, image media such as sequential pictures or diagrams can help learners focus on the key positions during a movement. Although static, images support cognitive processing and can serve as useful references for breaking down complex motor tasks (Sudjana & Rivai, 2011). Both media types are grounded in the principles of multimedia learning theory, which emphasizes the benefits of combining visual and verbal information in skill instruction (Corrigan et al., 2023; Meng et al., 2024).

Given the importance of shooting in futsal and the potential of media-based instruction, this study aims to investigate the effect of training using audio-visual and image media on the shooting performance of students in futsal extracurricular activities. Specifically, the study seeks to determine whether there is a significant improvement in shooting results after the application of each media, and whether one method proves more effective than the other. The results of this study are expected to contribute to the development of more effective training strategies in school sports programs.

The integration of educational media in sports training has been widely supported by previous research across various disciplines. Studies have shown that multimedia learning especially when combining audio, visual, and kinesthetic elements can significantly enhance motor performance and retention (Mayer, 2001; Paivio, 1986). In the context of physical education, the use of visual representations has been linked to improved understanding of movement mechanics and technique execution (Arsyad, 2014; Sudjana & Rivai, 2011). Furthermore, media-based instruction can stimulate motivation and engagement, particularly among adolescents, which is essential in extracurricular sports programs (Rohendi, Daryanto, & Puspitasari, 2018; Darmawan, 2011). When learners are exposed to repeated demonstrations and guided imagery, they tend to internalize movements more effectively compared to traditional instruction alone (Magill & Anderson, 2017; Schmidt & Lee, 2014). Additionally, visual media helps in reducing cognitive load during the learning of complex skills, allowing learners to focus on technique rather than verbal instructions (Sweller, Ayres, & Kalyuga, 2011; Clark & Mayer, 2016). These findings highlight the theoretical

and practical importance of selecting appropriate instructional media in sports coaching environments.

METHODS

This research employed a quantitative experimental approach using a pretest-posttest group design. The aim was to determine the effects of two different training media audio visual and image based on shooting performance in futsal. The sample consisted of 30 students from SMAN 4 Tanjungpinang who participated in extracurricular futsal activities during the 2025 academic year. The participants were divided equally into two groups: 15 students in the audio-visual media group and 15 students in the image media group. Each group received training focused on shooting using the inside of the foot, which is one of the fundamental techniques in futsal. The division of groups and application of different treatments allowed for a controlled comparison of the media's effectiveness.

Before and after the training intervention, both groups underwent a shooting performance test to assess their skill levels. The shooting test was designed to evaluate the success rate and accuracy of shots using the inside of the foot. Statistical analysis was conducted using the Paired Samples t-Test to determine the significance of improvement within each group, and the Independent Samples t-Test to compare the effectiveness between the two groups. All data were analyzed with a significance threshold of $p < 0.05$.

RESULT AND DISCUSSION

This study aimed to determine the effects of training using audio-visual media and picture media on shooting performance in futsal extracurricular activities at SMAN 4 Tanjungpinang. The analysis was conducted using Paired Samples Test and Independent Samples Test.

1. The Effect of Training Using Audio-Visual Media

Training using audio-visual media showed a significant improvement in futsal shooting performance. Normality and homogeneity tests were conducted and met the requirements for hypothesis testing. The Paired Samples Test results are presented in Table 1.

Table 1. Paired Samples Test Results – Audio-Visual Media

Pair	Mean Difference	Std. Deviation	Std. Error Mean	95% CI Lower	95% CI Upper	t	df	Sig. (2-tailed)
Pretest - Posttest	-6.20000	4.09180	1.05650	-8.46597	-3.93403	-5.868	14	**0.000**

The significance value (Sig. 2-tailed) is $0.000 < 0.05$, therefore Ho is rejected and Ha is accepted. This means that training using audio-visual media has a significant effect on futsal shooting performance.

2. The Effect of Training Using Picture Media

Training using picture media also showed a significant improvement in shooting performance. The results of the Paired Samples Test are shown in Table 2.

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Table 2. Paired Samples Test Results – Picture Media

Pair	Mean Difference	Std. Deviation	Std. Error Mean	95% CI Lower	95% CI Upper	t	df	Sig. (2-tailed)
Pretest - Posttest	-6.06667	4.86190	1.25534	-8.75910	-3.37423	-4.833	14	**0.000**

The significance value (Sig. 2-tailed) is 0.000 < 0.05, so Ho is rejected. This indicates a significant effect of training using picture media on futsal shooting performance.

3. Differences in the Effects Between Audio-Visual and Picture Media

To determine whether there are differences between the effects of audio-visual and picture media, an Independent Samples Test was used. The results are shown in Table 3.

Table 3. Independent Samples Test Results

Variable	F	Sig. Levene	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% CI Lower	95% CI Upper
Futsal Shooting (Inside Foot)	0.608	0.442	0.772	28	0.447	1.00000	1.29590	-1.65454	3.65454

The significance value (Sig. 2-tailed) is 0.447 > 0.05, meaning Ho is accepted. Thus, there is no significant difference between the effects of audio-visual and picture media training on futsal shooting performance.

Discussion

The findings of this study indicate that training using audio-visual media significantly improves shooting performance in futsal. This aligns with previous research suggesting that visual learning aids enhance motor learning by providing clear demonstrations of movement patterns, which are particularly useful in skill-based sports like futsal (Arsyad, 2014). The audio-visual approach allows learners to simultaneously observe the correct techniques and understand the timing and coordination required for effective shooting, thereby improving the assimilation of motor skills.

Similarly, the group trained using picture media also showed a significant improvement in shooting skills. Static images can effectively highlight key stages of movement execution, helping learners focus on body position, foot placement, and follow-through techniques. According to Sudjana & Rivai (2011), visual imagery can reinforce the cognitive aspects of learning by enabling students to visualize proper form and replicate it more accurately during practice. The use of picture media, though less dynamic than video, still facilitates understanding of movement principles and supports muscle memory development through repeated exposure.

Despite both methods being effective, the Independent Samples Test revealed no statistically significant difference in shooting outcomes between the two media. This finding suggests that both audio-visual and picture-based instruction can be equally beneficial when appropriately applied within a structured training environment. This supports the theory that the effectiveness of

instructional media largely depends on how well the content is delivered and matched to learners' needs (Mayer, 2001). Therefore, coaches and educators should consider the context and resources available when selecting training media, as both methods hold potential for improving athletic performance in futsal.

CONCLUSIONS

The findings of this study conclude that training using both audio visual and image media significantly improves shooting performance using the inside of the foot in extracurricular futsal activities at SMAN 4 Tanjungpinang. However, there is no significant difference between the two media types in terms of their effectiveness. Therefore, both audio visual and image-based training can be effectively implemented as alternative instructional methods to enhance students' technical skills in futsal, particularly shooting accuracy and technique.

CONFLICTS OF INTEREST STATEMENT

Regarding this study, the author declares that there is no conflict of interest.

AUTHOR CONTRIBUTIONS

Study concept and design: Rizki Kurniawan. Acquisition of data: Bafirman Bafirman. Analysis and interpretation of data: Umar Umar. Drafting the manuscript: Rizki Kurniawan. Critical revision of the manuscript for important intellectual content: Muhamad Sazeli Rifki. Statistical analysis: Rizki Kurniawan.

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