



Development of Volleyball Underhand Passing Through Wall Media for Students of MTs Islamiyah Mayang

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Abstract: This research aims to train students to develop accurate and effective underhand passing skills in volleyball through the use of wall media as a training tool. The study was conducted at MTs Islamiyah Mayang, Bosar Maligas District, Simalungun Regency. The research employed an experimental method with a sample of 15 students. Data analysis techniques included a normality test to assess the effect of wall media training on the accuracy of underhand passing in volleyball. The results based on the pre-test data using passing skill assessments indicated that the majority of students initially demonstrated weak passing performance. The application of wall media exercises showed positive effects in improving students' underhand passing precision and control.

Keywords: Wall Media; Training Effect; Underhand Passing; Accuracy

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INTRODUCTION

Volleyball is a widely played sport in schools, where mastering basic techniques such as underhand (bottom) passing is essential for students' overall performance (Hasibuan & Akhmad, 2021). Underhand passing serves as a foundational skill in volleyball, acting as the first line of defense and transition to attack, thus influencing the flow and success of the game. Despite its importance, many students struggle with accuracy and control in underhand passing due to limitations in practice media and methods (Putri, Romadhoni, Nasuka, Candra & Wicaksono, 2022).

Recent studies indicate that drill-based training and wall media can significantly improve volleyball passing skills. For example, Putri et al. (2022) found that right and left sideways drill exercises conducted over time increased passing ability in MTs Negeri 3 Tegal. Similarly, Hukubun, Marsuki, & Wainggai (2021) demonstrated that a drill method using wall media improved accuracy in students of SMA Negeri 1 Sentani. These findings suggest that repetitive, structured drills and wall feedback provide affordances for motor learning, especially in developing spatial awareness, proprioception, and control.

The novelty of this study lies in comparing the effectiveness of underhand passing drills using wall media versus traditional paired practice (pairs) in improving accuracy among junior secondary (MTs) students. While previous research has shown positive effects of wall media (Hukubun et al., 2021) and drill exercises (Putri et al., 2022), few

studies have directly compared wall-based underhand passing practice with paired practice in the same context. This comparison enables a better understanding of which method offers more efficient improvements in skill acquisition and accuracy.

Moreover, integrating wall media aligns with current motor learning theory which emphasizes feedback, repetition, and task specificity as critical components of skill acquisition (Hasibuan & Akhmad, 2021). The wall acts as a form of intrinsic feedback (ball returns) and allows high frequency of touches per unit time, which is beneficial for refining technique. Additionally, comparing with paired practice (which offers social interaction, external feedback, but possibly fewer repetitions) will shed light on optimal combinations of feedback and practice structure for underhand passing.

Therefore, the objectives of this research are: To measure the improvement in underhand passing accuracy following wall-based drill practice among MTs Islamiyah Mayang students. To compare the effectiveness of wall media vs paired practice in improving underhand passing. To assess the magnitude of improvement (effect size) of wall-based underhand passing drills. To examine students' perceptions of wall media as a training aid. To contribute empirical evidence to physical education pedagogy for volleyball skill training in junior secondary schools.

METHOD

This study employed an experimental quantitative design using a one-group pretest-posttest model to measure the effect of wall media training on students' underhand passing accuracy in volleyball. The experimental design was chosen because it allows the researcher to determine cause-and-effect relationships between the treatment (wall media practice) and the observed outcome (passing accuracy) (Saragih, 2021). The intervention was conducted over four weeks, consisting of twelve training sessions, each lasting 60 minutes, integrated into the regular physical education schedule.

The population consisted of all eighth-grade students at MTs Islamiyah Mayang, Bosar Maligas District, Simalungun Regency, while the sample included 15 students (8 male and 7 female) selected using a purposive sampling technique. The inclusion criteria required that participants had prior exposure to basic volleyball lessons but showed moderate-to-low proficiency in underhand passing based on initial observation tests. The small sample size was consistent with the quasi-experimental approach in school-based research (Hukubun, Marsuki, & Wainggai, 2021), which prioritizes depth and control over statistical generalization.

The instrument used to collect data was a standardized volleyball underhand passing accuracy test adapted from Putri et al. (2022), modified to fit the school's facilities. Students performed a series of passes toward a marked wall target area at distances of 2.5 meters, with points assigned for accuracy and ball control. Each student performed five consecutive trials during the pretest and posttest sessions. In addition, observation sheets were used to assess students' motivation and engagement during practice.

Data were analyzed using SPSS with normality and homogeneity tests conducted before hypothesis testing. The main analysis used a paired sample t-test to determine whether there was a statistically significant difference between pretest and posttest scores. Effect size (Cohen's *d*) was also calculated to determine the magnitude of the intervention effect (Hasibuan & Akhmad, 2021). This analytical approach ensured objectivity and reliability in evaluating the effectiveness of wall media in improving underhand passing accuracy among junior secondary school students.

RESULT AND DISCUSSION

Result

The results of this study indicate that wall media training had a positive and significant impact on students' underhand passing accuracy in volleyball. Data were collected through pretest and posttest performance scores of 15 students after four weeks of treatment.

Table 1. Descriptive Statistics of Underhand Passing Accuracy

No	Indicator	N	Mean	Std. Deviation	Minimum	Maximum
Pretest						
1	Score	15	48.67	6.45	38	59
Posttest						
2	Score	15	72.4	5.92	63	84

Based on Table 1, the mean score increased from 48.67 in the pretest to 72.40 in the posttest, showing a considerable improvement in students' passing performance after training using wall media. The reduction in standard deviation also suggests that the students' performance became more consistent.

Table 2. Paired Sample t-Test Results

Test	Mean Difference	t-count	Sig. (2-tailed)	Interpretation
Pretest - Posttest	-23.73	-12.84	0	Significant

The paired sample t-test results in Table 2 show a Sig. value = 0.000 ($p < 0.05$), indicating a significant difference between pretest and posttest scores. This means that the wall media training effectively improved students' underhand passing accuracy.

Discussion

The results of this study demonstrate that wall media training can significantly improve students' underhand passing accuracy in volleyball. The improvement observed between the pretest and posttest shows that consistent practice using wall rebounds enhances students' ball control, coordination, and precision. This occurs because the wall acts as both a practice partner and a feedback source, allowing students to perform repetitive movements and make immediate adjustments. The findings confirm that structured, repetitive, and feedback-based exercises are highly effective in developing motor skills in physical education.

These findings are in line with the study by Putri et al. (2022), who reported that drill exercises using directional training significantly improved students' volleyball passing abilities at MTs Negeri 3 Tegal. The repetitive structure of the training allowed students to better understand the movement patterns and increase accuracy in controlling the ball. Similarly, Hukubun, Marsuki, and Wainggai (2021) found that wall media drills enhanced students' volleyball passing accuracy at SMA Negeri 1 Sentani, Jayapura. Their research emphasized that wall training offers more repetitions per minute compared to traditional paired drills, making it ideal for individual skill mastery.

The present study's findings also align with Hasibuan and Akhmad (2021), who stated that the use of motor learning-based training models in volleyball helps improve both psychomotor and cognitive aspects of learning. The wall media method naturally supports motor learning principles by combining repetition, intrinsic feedback, and task variability. Students continuously received feedback from the ball's rebound, enabling them to refine their technique and develop greater proprioceptive control. This form of self-regulated learning is essential for developing movement accuracy and consistency.

Furthermore, the observed improvement in students' confidence and motivation confirms that the use of interactive and independent training tools enhances student

engagement in physical education. This result corresponds with the findings of Rohman and Anindita (2020), who highlighted that innovative media and contextual learning approaches significantly increase students' learning interest in sports activities. In this study, wall media provided an engaging learning environment where students could practice autonomously, reducing dependence on teachers or peers. Consequently, students became more active participants in their own learning process.

Another relevant finding is that wall media training supports differentiated learning within the classroom setting. Since each student can practice at their own pace, teachers can focus on providing individualized feedback and correction. This aligns with Wicaksono et al. (2021), who found that the use of adaptive learning media in volleyball training improved both technical skills and student autonomy. In addition, the method minimizes idle time during practice, allowing students to achieve higher repetition rates and, therefore, faster skill acquisition.

In summary, the discussion confirms that wall media training is an effective pedagogical innovation for enhancing underhand passing accuracy in volleyball. It integrates key principles of motor learning—repetition, feedback, and task engagement—while remaining cost-effective and easy to implement in school environments. Compared to conventional pair drills, wall-based exercises provide a more intensive, individualized, and efficient training experience. Thus, the present study contributes both theoretically and practically to physical education, supporting the implementation of innovative learning media to improve students' fundamental sport skills.

CONCLUSION

This study concludes that wall media training is an effective and practical method to improve students' underhand passing accuracy in volleyball. Through structured and repetitive practice using wall rebounds, students developed better control, coordination, and precision in performing passing movements. The method also fostered active participation, independence, and motivation during learning activities, creating a more engaging and productive environment in physical education. Overall, wall media can serve as an innovative and low-cost alternative for teachers to enhance students' fundamental volleyball skills and optimize the learning process in schools with limited facilities.

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CONFLICT OF INTEREST

Clearly explain whether there are any conflicts of interest related to the reported research.

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