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ANALYSIS OF TABLE TENNIS FOREHAND SERVICE ABILITY IN SPORTS EDUCATION STUDENTS

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Abstract

This study aims to analyze the service ability of table tennis forehand services, Sports Education Students, Faculty of Sports Sciences, Padang State University. This type of research is descriptive, to see how well the student's service forehand ability is. The population in this study is all students who take table tennis courses. The sample extraction technique used purposive sampling with a total of 24 people. Instruments used with targets on the table. The data analysis technique used is according to the type of search with percentage calculation. Based on the measurement and data analysis carried out, the results of table tennis forehand service in the Good category were obtained.

Keywords: Table Tennis; Forehand Service; Students

INTRODUCTION

The rapid development of table tennis games can be seen in various places, both in schools/colleges, homes, sports clubs, and professional competition levels. Table tennis is one of the mandatory courses listed in the learning curriculum. Students of the Department of Sports Education are given rights and obligations in carrying out the lecture. Achievements that students must have include mastering basic techniques in table tennis. Table tennis not only aims to improve the physical fitness of students, but also helps in honing motor skills, movement coordination, concentration, and quick thinking skills. Through the game of table tennis, students are trained to move actively, maintain body balance, and control hand and eye movements simultaneously known as coordination. In the learning process, table tennis teaches various positive values, such as discipline, sportsmanship, responsibility, and confidence. The affective aspects that are formed include: obeying the rules of the game, respecting the opponent, and accepting wins and losses with a good attitude. These values are very important in the formation of student character and personality.

Learning table tennis for beginners, especially students who are new to table tennis, usually starts from mastering basic techniques, such as how to hold bats, ready posture, footwork, and punches. A good mastery of basic techniques will

help students improve their playing skills and understand game strategies. Therefore, educators have an important role in providing training and learning methods that are interesting, effective, and in accordance with the student's ability level.

With the existence of table tennis learning in education in the University environment, it is hoped that students will not only acquire sports skills, but also have a healthy lifestyle, a positive spirit of competition, and the ability to cooperate with others. This makes table tennis one of the sports that has great benefits for the physical, mental, and social development of students. .

¹⁰ Table tennis is one of the very fast ball games in the world, because in table tennis games, the coordination of the eyes, hands and feet, must be ready when the ball is played (Sindik & Kondrič, 2011) (Russian et al., 2017) (González-devesa & Blanco-Martínez, 2025) (Belardinelli, 2024). The components of physical condition required in playing table tennis, are also studied and trained during table tennis learning. Physical condition also affects the outcome of technique, tactics, and mentality. Table tennis It is seen as a light sport, but table tennis requires good physical ability because the game is fast-paced and requires proper responses. Players must have the agility to move in different directions, reaction speed to return the ball, and endurance to be able to play for a long time without experiencing excessive fatigue.

One of the basic techniques that is an important point ² in the game of table tennis is the stroke/stroke technique. ⁴ The basic techniques in table tennis are grip, stance, footwork and stroke. The shape of the punch in table tennis includes; Serve, Drive, Push, Chop, Block, and Smash (Fadli & Makassar, 2026) (Suwanto, 2024). One of the basic techniques that is an important point ² in the game of table tennis is the stroke/stroke technique. As for the direction of the shot in table tennis, there are forehands and backhands (Mao et al., 2023) (Maheshwari et al., 2023). In addition, it also discusses the types of spins/spins.

This research will discuss the technique of punching, namely serving. Serves are not only used to start a rally, but also play a role in creating attack opportunities through the placement and variation of the ball spin (Aprilo et al.,

2025) (Haas et al., 2023). The initial blow to start the game, known as a serve, is also an early strategy to get points so that you can win the match. One of the service techniques that is often used in table tennis is the forehand serve. Based on observations, some people tend to use forehand serves more often in playing table tennis. Players who have good forehand service skills will usually find it easier to get attack and point opportunities. Therefore, mastering forehand service techniques is crucial for players, especially in competitive situations.

According to the ⁶International Table Tennis Federation (ITTF) (2021), service ⁵is the initial blow to start the game to control the course of the game with certain rules. The forehand service is the dominant service technique because it provides greater flexibility in controlling the spin and direction of the ball (Gibran, 2021). (Tamaki & Yoshida, 2025)

METHOD

This research is with a descriptive approach. The research was conducted at the Hall Sport Center FIK Lubuk Buaya in December 2025. The population in this study is all FIK students who take table tennis courses, totalling 122 people. The sample in the study was 24 people. ³This study employed ⁴convenience sampling, a non-probability sampling technique in which participants are selected based on their availability and willingness to participate (Creswell, 2012). After that, ¹This study employed convenience sampling, a non-probability sampling technique in which participants were selected based on their accessibility and willingness to participate in the research (Haro-Sarango, 2026). The test is measured using a serve to a predetermined table goal with 10 balls.

Description: A = tester, B = testee

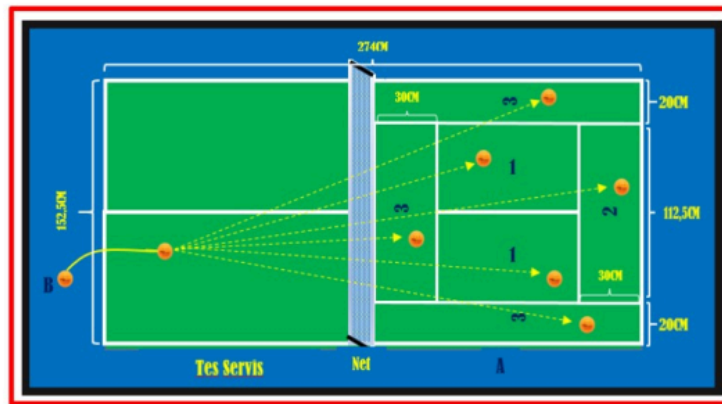


Figure 1. Instrument of forehand serve
(Tantri & Mashud, 2023)

Data on table tennis students' forehand service ability is obtained by the way the testee directs the ball to a specified point, and will obtain a score according to the level of difficulty. The data in the analysis uses percentage calculation.

RESULTS AND DISCUSSION

Based on the results of the ability test Service Forehand which is done, the maximum score = 23, minimum score = 8, with the mean value = 16.82, median = 17, mode = 15, standard deviation = 4.47, and range = 15. For more details, the ability test Service Forehand can be seen in table 1

Table 1. Distribution of Students' Forehand Service Ability Based on Normative Categories

A. Descriptive Statistics			
Statistic	Value		
Mean	16.82		
Median	17		
Mode	15		
SD	4.47		
Min	8		
Max	23		
Range	15		
B. Normative Category Distribution			
Category	Score Interval	N	%
Very Good	25–30	0	0
Good	20–24	8	33.3
Fair	15–19	11	45.8
Poor	10–14	3	12.5

Very Poor	0–9	2	8.3
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Table 1 presents the descriptive statistics and category distribution of the forehand service ability scores. The participants obtained a mean score of 16.82 ($SD = 4.47$), with scores ranging from 8 to 23. The median and mode were 17 and 15, respectively. Based on the normative assessment criteria, 11 students (45.8%) were classified as having Fair forehand service ability, 8 students (33.3%) were classified as Good, 3 students (12.5%) as Poor, and 2 students (8.3%) as Very Poor. None of the participants reached the Very Good category. Overall, the forehand service ability of the participants was predominantly classified as Fair. For more details, see the forehand service capability frequency distribution histogram below:

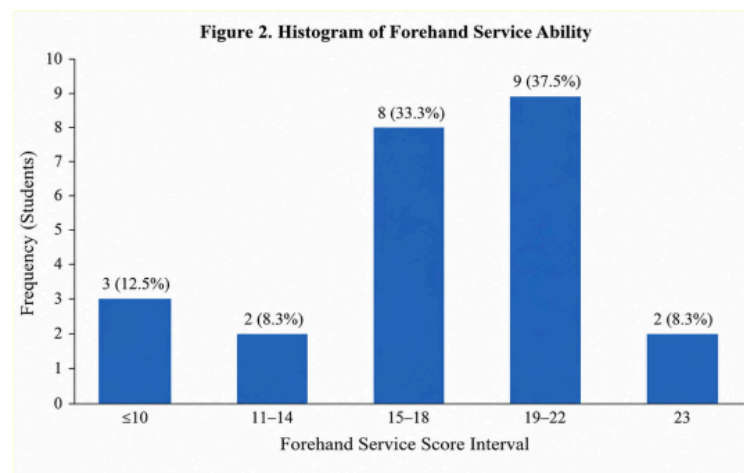


Figure 2. Forehand Service Ability Distribution Histogram

DISCUSSION

This study aimed to analyze the forehand service ability of students in the Sports Education program in table tennis. The findings revealed that the students' forehand service ability was generally categorized as good. However, this level of performance has not yet reached its optimum, indicating that further improvement is still required to develop more effective service techniques. Service is considered one of the most fundamental skills in table tennis because it initiates play and provides opportunities to establish offensive strategies and tactical advantages ((ITTF, 2024); (Fuchs, 2021)

A forehand service is executed using the forehand side of the racket, with ⁵ the ball first bouncing on the server's side of the table before passing over the net and landing on the opponent's side in accordance with the official rules of table tennis ((ITTF, 2024). The service begins with the ball resting freely on ⁶ the open palm of the hand and being projected vertically at least 16 cm before being struck. Proper execution of the forehand service requires correct body positioning, grip, arm swing, wrist movement, and follow-through to ensure that the service is both legal and effective ((ITTF, 2024); (Tamaki & Yoshida, 2025). An effective forehand service requires well-coordinated movements, concentration, precise timing, and the ability to control the direction, speed, and spin of the ball (Tamaki & Yoshida, 2025). ⁹ The findings of this study indicate that although the students' forehand service ability was categorized as good, continuous improvement is still necessary to achieve optimal performance. In table tennis, service is not only the initial stroke to start a rally but also a tactical weapon that can determine the quality of the subsequent attack by creating pressure on the opponent through variations in spin, speed, and ball placement(Fuchs, 2021).

In addition, successful forehand service performance depends on efficient biomechanical movement, including coordinated body posture, trunk rotation, upper-limb motion, and racket control, which collectively contribute to service accuracy and effectiveness(Wong et al., 2020). Furthermore, biomechanical analyses of forehand service have demonstrated that the coordinated rotation of the arm and wrist segments plays a significant role in increasing racket-head velocity and ball speed, thereby enhancing the effectiveness of the service during match situations (Ibrahim et al., 2022). Therefore, structured and repetitive practice combined with technical feedback is essential to improve students' forehand service performance and enable them to apply the skill more effectively in competitive play.

This study concludes that students' forehand service ability is generally categorized as good but has not yet reached an optimal level. Improving service performance requires structured and progressive training emphasizing technical accuracy, biomechanical coordination, movement efficiency, and tactical

variation. These findings provide practical implications for coaches and lecturers in designing evidence-based training programs. Future research should investigate the effectiveness of various training methods to further enhance forehand service performance in table tennis.

CONCLUSION

Based on the above explanation, it can be concluded that sports education table tennis students have forehand service skills in the good category. It is expected that teachers and students will be more active in making methods, especially in improving the ability of table tennis forehand service. Furthermore, to the next researcher to be able to conduct research with a large number of samples.

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