

Analysis of Service Skills for Volleyball Students of SMK Negeri 1 Suak Tapeh

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Abstrak

Penelitian ini bertujuan untuk menganalisis tingkat keterampilan servis voli pada siswa SMK Negeri 1 Suak Tapeh. Jenis penelitian ini menggunakan pendekatan deskriptif kuantitatif dengan metode survei. Populasi dalam penelitian ini adalah seluruh siswa kelas XI SMK Negeri 1 Suak Tapeh, yang berjumlah 29 orang, dan semuanya digunakan sebagai sampel penelitian (sampling total). Instrumen yang digunakan dalam penelitian ini adalah tes keterampilan servis atas voli, yang bertujuan untuk mengukur kemampuan siswa dalam melaksanakan teknik servis atas dengan benar dan efektif. Data dari penelitian menunjukkan bahwa tingkat keterampilan servis voli siswa berada dalam kategori cukup, dengan persentase 31,0%. Kategori baik sebesar 27,6%, sangat baik 13,8%, kurang 20,7%, dan sangat kurang 6,9%. Hasil ini menunjukkan bahwa sebagian besar siswa telah memahami dasar-dasar teknik servis atas, namun masih ada ruang untuk perbaikan dalam hal koordinasi gerakan, kekuatan pukulan, dan arah bola. Berdasarkan hasil penelitian ini, dapat disimpulkan bahwa keterampilan servis siswa voli SMK Negeri 1 Suak Tapeh masih perlu ditingkatkan melalui latihan yang lebih terarah dan penerapan model pembelajaran yang beragam. Diharapkan guru Pendidikan Jasmani dapat mengembangkan strategi pembelajaran yang menarik dan efektif agar kemampuan teknik servis siswa dapat ditingkatkan secara signifikan.

Kata kunci: Servis Terbaik, Bola Voli, Keterampilan

Abstract

This study aims to analyze the level of volleyball service skills in students of SMK Negeri 1 Suak Tapeh. This type of research uses a quantitative descriptive approach with a survey method. The population in this study is all grade XI students of SMK Negeri 1 Suak Tapeh, which totals 29 people, and all of them are used as research samples (total sampling). The instrument used in this study is a volleyball top serve skill test, which aims to measure students' ability to perform top serve techniques correctly and effectively. The data from the study shows that the level of service skills for volleyball students is in the category of sufficient, with a percentage of 31.0%. The good category is 27.6%, very good 13.8%, less than 20.7%, and very less than 6.9%. The results indicate that most students have understood the basics of upper serve techniques, but there is still room for improvement in terms of coordination of movement, punch strength, and ball direction. Based on the results of this study, it can be concluded that the service skills of volleyball students of SMK Negeri 1 Suak Tapeh still need to be improved through more targeted exercises and the application of varied learning models. It is hoped that Physical Education teachers can develop interesting and effective learning strategies so that the ability of service techniques for students can be significantly improved.

Keywords: Top Serve, Volleyball, Skills

1. INTRODUCTION

Physical education is an integral part of overall education that aims to develop aspects of physical fitness, motor skills, knowledge, and sportsmanship in students. Through physical education, students are not only directed to move physically, but also to form a disciplined, resilient, and cooperative personality in a sports activity (Sukintaka, 2020). Thus, physical education is an important forum in shaping the character of students as a whole, sejalan dengan Grand Design Keolahragaan Nasional yang menekankan pembinaan keterampilan dasar olahraga secara terstruktur di jalur pendidikan (Kemenpora, 2021).

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One of the sports that is taught in schools and has an important role in the formation of motor skills is volleyball. The game of volleyball demands good coordination between strength, precision, and teamwork, serta menjadi sarana pengembangan gerak lokomotor dan non-lokomotor yang mendukung kebugaran jasmani siswa (Widiastuti, 2021). In the context of physical education learning, volleyball provides opportunities for students to develop basic movement skills as well as social values such as sportsmanship and responsibility (Widiastuti, 2021; Atmojo, 2019).

Basic techniques in the game of volleyball include passing, serving, smashing, and blocking. Among these techniques, the top serve is an important component because it is the first step in starting a game. A well-done top serve can provide a tactical advantage for the team and make it difficult for opponents to receive the ball (Sudjana, 2019), sebagaimana ditunjukkan pula oleh temuan bahwa akurasi servis yang baik berkorelasi dengan efektivitas permainan tim (Forte et al., 2019). Therefore, mastery of top serve techniques is a fundamental skill that every player must have, including students at the vocational high school level, because mastery of basic serve techniques has been proven to be a foundation for effective performance in the game (Aji et al., 2020; Andrianto, 2019).

The top serve in volleyball requires good coordination between arm strength, body flexibility, and accuracy in hitting the ball. According to Arma and Nurhayati (2020), the success of the top serve is influenced by physical abilities such as arm muscle strength, body balance, and the ability to concentrate when hitting shots. Temuan ini sejalan dengan penelitian yang menunjukkan adanya hubungan signifikan antara kekuatan lengan, fleksibilitas pergelangan tangan, koordinasi mata-tangan, dan akurasi servis atas (Sahabuddin & Ishak, 2021; Saptiani et al., 2019; Bawono & Aqer, 2019). Failure to master this technique can lead to mistakes that have a direct impact on the earning of points in the match, sebagaimana diperlihatkan oleh studi yang menemukan banyak pemain masih melakukan kesalahan teknis pada servis atas sehingga akurasi dan efektivitas kompetitif menurun (Putra et al., 2019).

In learning at school, especially at SMK Negeri 1 Suak Tapeh, upper service skills are often an aspect that still needs to be improved. Based on initial observations, there are still some students who have not been able to perform the top serve well, both in terms of technique and punch strength. Kondisi serupa juga dilaporkan di beberapa sekolah dan klub, di mana keterampilan servis atas mayoritas siswa masih berada pada kategori sedang hingga cukup (Mulya & Padli, 2019; Husaeni et al. dalam Undiksha, 2023; Fauzi et al., 2025). This shows that further analysis is needed regarding the factors that affect upper service skills in SMK Negeri 1 Suak Tapeh students, mengingat pemetaan tingkat kemampuan servis atas penting untuk merancang program latihan lanjutan (Pratama et al., 2025).

Analysis of top service skills is important to find out the extent of students' ability to master the technique, as well as to identify movement errors that often occur. According to Hidayat (2022), skill analysis in sports aims to provide feedback for teachers or coaches in improving students' movement techniques appropriately. Thus, the results of the analysis can be the basis for developing more effective learning strategies, termasuk penerapan model latihan khusus servis atas yang telah terbukti meningkatkan akurasi dan konsistensi pada siswa (Aji et al., 2020; Nurhaliza et al., 2019).

In addition to technical factors, students' motivation and interest in participating in volleyball learning also affect the results of their skills. Students who have high motivation tend to practice more diligently and pay attention to the teacher's instructions well, so that their skills develop faster (Rohmah, 2021). Therefore, a fun and interactive learning approach is needed

in improving upper service skills, misalnya melalui model kooperatif STAD atau game-based learning yang terbukti meningkatkan partisipasi aktif dan hasil belajar keterampilan teknik bola voli (Rahayu, 2020; Setiawan, 2024).

Physical education teachers have a central role in guiding students to master basic soccer skills well. According to Suryani (2020), teachers not only function as teachers but also as facilitators who are able to create a conducive learning environment and encourage students to participate actively in every activity. A learning approach that emphasizes hands-on practice and positive feedback will help students improve their service techniques, terlebih jika didukung media pembelajaran audiovisual yang telah terbukti meningkatkan hasil belajar servis di SMK (Handayani, 2021).

Through the analysis of upper service skills, teachers can assess aspects such as body position, coordination of movement, hitting strength, and accuracy of ball direction. The assessment can be used to determine the level of student skill mastery and provide targeted learning interventions (Mahendra, 2021). Thus, this analysis not only serves as an evaluation, but also as a step to develop the quality of PJOK learning in schools, sejalan dengan temuan bahwa instrumen tes servis yang tersusun baik mampu memandu pelatih dalam merancang teknik latihan yang lebih efektif (Mulya & Padli, 2019; Journal Sport Area, 2024).

Based on this description, this study is entitled "Analysis of Service Skills for Volleyball Students of SMK Negeri 1 Suak Tapeh". The purpose of this study is to analyze the level of upper-service skills that students possess as well as identify the factors that affect these abilities. The results of the research are expected to contribute to the development of more effective and interesting soccer learning strategies in the vocational high school environment, including recommendations for the use of progressive training and modified game methods that have been proven to increase serving ability (Wiguna, 2022; Sopiyan et al., 2025).

2. METHOD

This study uses a quantitative descriptive approach. This approach is used to describe or analyze the level of service skills of students based on the results of tests conducted without providing specific treatment. According to Sugiyono (2021), quantitative descriptive research aims to describe a phenomenon that occurs systematically and factually based on numerical data obtained from the field. Therefore, this study is focused on analyzing the results of service skills for volleyball students at SMK Negeri 1 Suak Tapeh, selaras dengan penggunaan desain survei deskriptif pada kajian keterampilan servis di berbagai klub dan sekolah (Arikunto, 2020; Aji et al., 2020). This research was carried out at SMK Negeri 1 Suak Tapeh, Banyuasin Regency, South Sumatra Province. The selection of this location is based on the consideration that the school actively implements physical education learning activities, including volleyball game materials.

The population in this study is all students of SMK Negeri 1 Suak Tapeh who take the subject of Physical Education, Sports, and Health (PJOK). The research sample was determined by purposive sampling, which is sampling with certain considerations (Arikunto, 2020). The sample used was 29 grade XI students, with the reason that at this level, students had learned basic volleyball techniques, including top serves, so that they were able to take the test well, as in the case of the study on the keterampilan servis atas di jenjang SMA/SMK, which also focused on students who had already learned the basic techniques (Andrianto, 2019; Mulya & Padli, 2019).

This study uses only one variable, namely, students' volleyball service skills. This variable was analyzed based on the results of the upper serviceability test conducted on all research samples. The instrument used in this study was a volleyball service skill test. This test aims to measure students' ability to perform top serves by paying attention to technique, accuracy, and punch strength. The test is carried out by each student performing 10 attempts in the target area that has been determined. The scoring is based on the number of balls that make it into the target area with the correct technique. The assessment criteria refer to the guidelines for the football skills test from the Ministry of National Education (2010), as follows:

Grade 5: On-target service and correct technique.

Grade 4: Serve was almost on target with a few technical errors.

Score 3: Serve hit the net or missed the goal slightly.

Grade 2: Serve failed several times, technique not correct.

Grade 1: Unable to service properly.

Final scores are obtained from the average results of 10 attempts converted into a scoring scale of 1–5. The steps to implement this research are as follows:

1. Preparation: Prepare test instruments and prepare research equipment (field, volleyball, net, and target area).
2. Coordination: Coordinate with PJOK teachers at SMK Negeri 1 Suak Tapeh to determine the time for the test.
3. Test Implementation: Students are asked to perform the top service 10 times. Each service result is observed and assessed by two testers to ensure objectivity.
4. Data Collection: Test result data is recorded in the assessment observation sheet.
5. Data Analysis: The data collected is then processed to determine the category of service skills for students.

The test result data was analyzed using descriptive statistics, which calculated the mean score, percentage, and category of students' ability. The formula used to determine the percentage of skills is:

Furthermore, the percentage results are categorized into the following skill levels (Fajrila, 2020):

Table 1. *Rating Categories*

81–100	Excellent
61–80	Good
41–60	Enough
21–40	Less
≤ 20	Very Less

The analysis was carried out to determine the distribution of service skills to students, as well as to determine which aspects need to be improved the most in the learning process. The volleyball service test instrument used has been validated by PJOK experts, especially lecturers and teachers experienced in the field of volleyball. The validity of the content is obtained through the conformity between the service technique indicator and the measurement objective. Meanwhile, the reliability of the instrument was tested through trials on 10 students outside the main sample, and a reliability value of $r = 0.87$ was obtained,

which indicates that the instrument is reliable and suitable for use (Azwar, 2021). Hasil ini konsisten dengan prinsip bahwa instrumen pengukuran keterampilan gerak harus memiliki reliabilitas dan validitas yang memadai sebelum digunakan dalam evaluasi pembelajaran pendidikan jasmani.

3. RESULT AND DISCUSSION

This study was conducted on 29 students in grade XI of SMK Negeri 1 Suak Tapeh. Each student conducted 10 upper service experiments, and the average score of the results was converted into an assessment scale of 1-5 according to the guidelines of the Ministry of National Education (2010). The following is a table of the frequency distribution of the results of the upper service skills test before analysis:

Table 2. *Frequency Distribution of Service Skill Scores for Students of SMK Negeri 1 Suak Tapeh*

Category	Value Range	Frequency (Student)	Information
Excellent	15	4	Excellent technique and on-target service
Good	24	8	Good technique, slight misdirection of the ball
Sufficient	33	9	Unstable service, still some technical errors
Less	42	6	Serves often fail to cross the net
Very Less	51	2	Unable to serve properly

Based on the data above, an analysis was carried out to determine the percentage of service ability of students using a formula, and the data in the table below was compared:

Table 3. *Distribution of Service Ability Percentage for Students of SMK Negeri 1 Suak Tapeh*

No.	Category	Value Range	Frequency (Student)	Percentage (%)
1	Excellent	15	4	13.8
2	Good	24	8	27.6
3	Sufficient	33	9	31.0
4	Less	42	6	20.7
5	Very Less	51	2	6.9
Total		29	29	100

sed on Table 3, it is evident that most students fall into the "Sufficient" category, with 9 students (31.0%), followed by the "Good" category with 8 students (27.6%), and "Less" with 6 students (20.7%). Only 4 students (13.8%) achieved the "Excellent" category, while 2 students (6.9%) were still in the "Very Less" category. This distribution pattern aligns with various studies on service skills at clubs and schools, which also show a dominance in the moderate or sufficient category, with smaller proportions in the excellent and very poor categories (Mulya & Padli, 2019; Patriot, 2019).

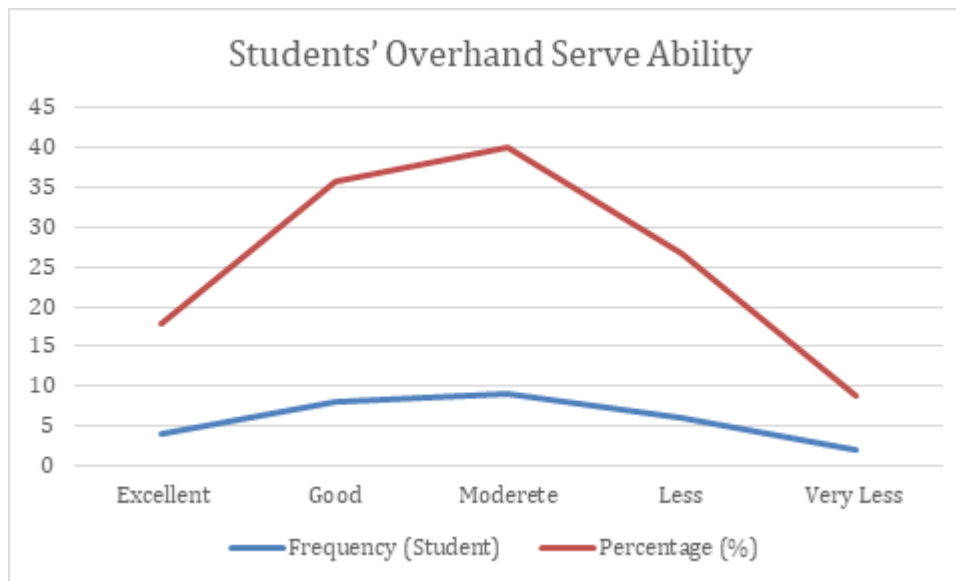


Figure 1. Student Service Ability Outcome Diagram

These results show that the level of service skills for SMK Negeri 1 Suak Tapeh students is generally still in the "Sufficient" category. This means that some students have understood the basics of upper serve techniques, but there are still errors in the aspects of coordination, punch strength, and accuracy of ball direction. The results of field observations also showed that some students were not able to maintain body balance and arm position when performing upper serves. According to Hidayat (2022), common mistakes in upper serve techniques often occur due to a lack of coordination between foot movements and arm swings when hitting the ball. This is in line with the findings of Arma and Nurhayati (2020) who stated that the success of the upper serve is influenced by the factors of arm muscle strength, concentration, and training experience, serta diperkuat oleh studi yang menunjukkan kontribusi positif kekuatan lengan dan koordinasi mata-tangan terhadap akurasi servis (Saptiani et al., 2019; Sahabuddin & Ishak, 2021).

These findings show that students' service skills are generally at a moderate level. However, there is still room for improvement, especially in basic engineering aspects such as body position, hand swing, and ball accuracy when hitting. This is in line with the opinion of Subroto (2019), who states that the ability of the upper serve in volleyball is greatly influenced by the coordination of movements, arm muscle strength, and the timing of ball contact. Penelitian lain juga menunjukkan bahwa akurasi servis siswa ekstrakurikuler umumnya berada pada kategori sedang hingga cukup karena keterbatasan intensitas latihan dan pemrograman latihan yang kurang spesifik (Fauzi et al., 2024; Mulyana et al., 2024).

In addition, the factors of training that have not been properly programmed and the lack of variety of PJOK learning methods can also affect these results. According to Winarno (2020), the success of students in mastering sports skills is highly dependent on the consistency of practice and learning approaches that are in accordance with the characteristics of students. Temuan tentang efektivitas model latihan progresif, modifikasi permainan, dan media

audiovisual dalam meningkatkan keterampilan servis atas mendukung pentingnya perbaikan desain latihan di sekolah (Aji et al., 2020; Wiguna, 2022; Handayani, 2021).

Thus, it can be concluded that the service skills of volleyball students of SMK Negeri 1 Suak Tapeh still need to be strengthened through technical exercises and more varied learning approaches in order to achieve the good to very good category for all students. The results of this study confirm the importance of the application of gradual technique training and direct feedback from PJOK teachers in volleyball learning. Through this analysis, teachers can know students' initial abilities and design more effective practice strategies to improve their upper service skills, misalnya dengan menerapkan latihan servis progresif, game-based training, dan model kooperatif yang telah terbukti meningkatkan akurasi dan daya pukul servis atas (Sopiyan et al., 2025; Setiawan, 2024; Rahayu, 2020).

4. CONCLUSION

Based on the analysis of the data in Table 3, it can be concluded that most students at SMK Negeri 1 Suak Tapeh have a service ability in the "Sufficient" category, with 9 students (31.0%) falling into this group. The "Good" category follows with 8 students (27.6%), and "Less" with 6 students (20.7%). Only a few students reached the "Excellent" category (4 students or 13.8%) and "Very Less" (2 students or 6.9%). This distribution pattern indicates that the majority of students are at a moderate or sufficient skill level, suggesting that there is room for improvement in their service skills. It shows that most students still need more development to reach higher skill categories, especially "Excellent". Therefore, more focus should be placed on improving students' service techniques so that more students can reach better categories, especially "Excellent".

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