

## ANALYSIS OF THE LEVEL OF DIFFICULTY OF UNDERHAND SERVE IN VOLLEYBALL LEARNING FOR STUDENTS

Nur Cholis Majid<sup>1</sup>, Ramadhany Hananto Puriana<sup>2\*</sup>, Muhammad Wahyono<sup>3</sup>

<sup>1</sup>PGRI Adibuana University Surabaya, Jl. Dukuh Menanggal XII, Dukuh Menanggal, District. Gayungan, Surabaya, East Java 60234,

[\\*ramadhany@unipasby.ac.id](mailto:*ramadhany@unipasby.ac.id)<sup>2</sup>

### ABSTRACT

This study aims to analyze the level of difficulty of 6th grade students in performing underhand volleyball serves using a qualitative descriptive approach. The subjects of the study consisted of 20 students. Data were collected through documentation, questionnaires, interviews, and direct observation in the field. The analysis focused on identifying factors that contributed to students' difficulties, including technical, physical, psychological, and facility aspects. The results showed that 2 students (10%) experienced a very high level of difficulty, 10 students (50%) experienced a high level of difficulty, 7 students (35%) experienced a low level of difficulty, and only 1 student (5%) experienced a very low level of difficulty. Therefore, the majority of students (50%) were categorized as having a high level of difficulty. This difficulty was mainly caused by a lack of mastery of basic underarm serve techniques, poor physical condition—such as weak arm strength and limited movement coordination—and low motivation during physical education learning. In addition, the limited school sports facilities, such as volleyball courts and inadequate equipment, were also identified as factors that hinder students' learning process. This study is expected to be an evaluation material for physical education teachers in designing more effective teaching strategies. This study also highlights the importance of considering students' needs in terms of technical training, motivational support, and the availability of adequate sports facilities to improve learning outcomes in volleyball underhand serve. In addition, the findings of this study can be used to develop more effective physical education programs that meet students' needs.

### ARTICLE HISTORY

Received 8 October 2025

Accepted 25 November 2025

### KEYWORDS

Volleyball Underhand Service; Grade VI Students; Difficulty Level; Physical Education

### Introduction

The elementary school curriculum includes physical education, which seeks to improve children's motor skills, physical fitness levels, and the adoption of a healthy lifestyle. In addition to teaching sports skills, physical education also instills the values of sportsmanship, teamwork, and discipline. According to (Viera, B. L., & Fergusson, 2004), one of the sports that students like is volleyball, but many do not have adequate skills. Most students prefer to watch rather than participate in the game.

Volleyball, especially underhand volleyball serve, is an important part of physical education learning in elementary schools. Through mastery of underhand serve techniques, physical education goals can be achieved well. To support the success of this learning, adequate facilities and infrastructure are needed, in addition to support from teachers and students themselves. Facilities and infrastructure can be said to be good if they have met the established standards and can meet the needs of all students (Sutikno, 2009). In addition, student conditions also greatly affect the achievement of learning objectives. Students need to have high motivation, good physical condition, and supportive body posture. If these factors are not present, then the learning process and achievement of goals will be difficult to achieve. Learning volleyball underhand serve can run

smoothly if students have mastered the basic movements of the technique, so that students can actively move during the learning process (Khader, I. A., & Amin, 2014).

Student activity in moving greatly supports the smoothness of the learning process and helps achieve the goals of physical education. To ensure that volleyball underhand serve learning can be carried out properly, teachers need to understand the various factors that can support and hinder learning. Teachers must also be aware of the challenges faced by students when learning volleyball underhand serve techniques. Learning volleyball underhand serve in elementary schools can be successful if these variables are well understood and can be implemented in accordance with the goals of physical education (Yamin, 2005).

Example data at Blega 02 Elementary School, Blega District, volleyball underhand serve learning has not fully achieved the desired goals. This is due to various difficulties experienced by students, which are influenced by several factors. The first factor is the students themselves, including their physical and psychological conditions. Students who are in poor physical condition or lack motivation will have difficulty learning volleyball underhand serve (Syariffudin, 1994). In addition, psychological factors such as low self-confidence or lack of interest in volleyball can also affect learning outcomes. In addition to students, teacher factors are also very important in this learning (Soytürk, 2019).

If the teacher does not prepare the learning well, both in terms of methods and materials taught, then the underhand serve learning in volleyball will be less successful. Motivating and disciplining teachers to manage learning also plays a big role in the smoothness of the student learning process. The teacher's mastery of the material, especially regarding the underhand serve technique, must be really good so that they can teach students properly (Agus Dwi Jatmiko., 2011). The facilities and infrastructure factor is also no less important. If the number or quality of the tools and facilities available are inadequate, then it will hinder the learning process. For example, if the volleyball or net is in poor condition or the number is not enough, students cannot practice optimally.

Volleyball requires mastery of basic techniques, one of which is the underhand serve. Technique Because it is simpler than the overhead serve or jump serve, this serve is often used by beginners. (Agus Susanto, 2010) stated that the underhand serve requires muscle strength, coordination, and high concentration. Therefore, the learning process must consider these factors.

At SDN Blega 01, volleyball learning is focused on the underhand serve technique. However, many students still have difficulty in mastering this technique. This study aims to analyze the level of student difficulty and the factors that influence it, both internal such as physical condition and self-confidence, and external such as teaching methods and facilities. It is hoped that the findings of this study will help educators in creating more effective teaching methods.

## **Method**

The elementary school curriculum includes physical education, which seeks to improve students' physical fitness and motor skills, as well as healthy living habits. In addition to teaching sports skills, physical education also instills the values of sportsmanship, teamwork, and discipline. According to (Nugroho, 2013), one of the sports that students like is volleyball, but many do not yet have adequate skills. Most students prefer to watch rather than participate in the game.

In elementary schools, volleyball, especially underhand serve, is an important component in physical education teaching. Through mastery of underhand serve techniques, physical education goals can be achieved well. To support the success of this learning, adequate facilities and infrastructure are needed, in addition to support from teachers and students themselves. Facilities and infrastructure can be considered good if they meet the standards that have been set and can meet the needs of all students. In addition, the condition of the students also greatly influences the achievement of learning goals. Students need to have high motivation, good physical condition, and

body support position (Pardjono, 2007). The learning process and achievement of goals will be difficult if these elements are not present. Learning underhand serve in volleyball can run smoothly if students have learned the basic movements of the technique, so that students can move actively during the learning process. Student activity in moving greatly supports the smooth learning process and helps achieve physical education goals. To ensure that learning underhand serve in volleyball can be carried out well, teachers need to understand the various factors that can support and hinder learning (Yunus, 1992). Teachers must also be aware of the challenges faced by students when learning underhand serve techniques in volleyball. Learning volleyball underhand serve in elementary schools can be done in accordance with physical education objectives if these variables are well understood (Marsiyem, 2018).

The objectives of volleyball underhand serve learning at Blega 02 Elementary School, Blega District have not been fully met. This is because children face various challenges that are influenced by several variables. The students themselves, especially their mental and physical health, are the main considerations. Students who lack motivation or are in poor physical condition will find it difficult to master volleyball underhand serve. In addition, psychological factors such as low self-confidence or lack of interest in volleyball can also affect learning outcomes. In addition to students, teacher factors are also very important in this learning. If the teacher does not prepare the learning well, both in terms of methods and materials taught, then the learning of underhand serve in volleyball will be less successful.

Motivation and discipline among teachers in managing learning also play a big role in the smoothness of the student learning process. The teacher's mastery of the material, especially regarding the underhand service technique, must be really good in order to be able to teach students properly. The facilities and infrastructure factor is also no less important. If the number or quality of the tools and facilities available are inadequate, then it will hinder the learning process. For example, if the volleyball or net is in poor condition or the number is not enough, students cannot practice optimally.

Volleyball requires mastery of basic techniques, one of which is underhand serve. Because it is simpler than overhead serve or jump serve, beginners often use this method. (Agus S. Suryobroto, 2004) stated that underhand serve requires muscle strength, coordination, and high concentration. Therefore, the learning process must consider these factors. The instruments used in this study consisted of interviews, observations, questionnaires, and documentation. Interviews were conducted in a semi-structured manner with students and physical education teachers to explore the difficulties faced in learning the underhand serve in volleyball. Observations were carried out directly during learning activities to record students' technical errors, levels of motivation, and interactions during the learning process. Questionnaires were used to measure students' perceptions of the level of difficulty, which included both open and closed-ended questions. In addition, documentation was collected in the form of lesson plans (RPP), teaching materials, and student learning notes to support and validate the findings.

Volleyball learning focuses on the underhand serve technique. However, many sixth grade students still have difficulty in mastering this technique. The purpose of this study was to characterize and comprehensively examine the level of difficulty experienced by students when performing the underhand serve method in volleyball. The qualitative approach allows researchers to not only collect numerical data, but also understand the factors that influence students' difficulties, such as motivation, technique, and physical and psychological constraints during the learning process. The main focus of this study is to describe the phenomena that occur during underhand serve learning in volleyball. The data collected in this study include primary qualitative data in the form of in-depth interviews with students regarding their experiences in performing underhand serves, as well as supporting data in

the form of direct observations during practice and field notes regarding student behavior during learning. Data were obtained through interviews and observations of their attitudes, responses, and feelings during the learning process. In addition, physical education teachers act as secondary data sources that provide insights into teaching methods, observations of student difficulties, and factors that influence volleyball learning. Documentation is also used to complete the data, including learning notes, Learning Implementation Plans (RPP), and teaching materials.

Data collection techniques in this study involved interviews, observations, questionnaires, and documentation. Interviews were conducted in a semi-structured manner with students and teachers to explore information related to the difficulties faced in learning volleyball underhand serve. Observations were conducted directly to record technical errors, motivational factors, and student interactions during the learning process. In addition, questionnaires were used as a complement to measure students' perceptions of the level of difficulty in learning, which were arranged in the form of open and closed questions. Documentation was carried out by collecting various documents related to the implementation of learning (Viera, B. L., & Ferguson, 2004).

Data analysis in this study was carried out through several stages, namely coding and categorization, data presentation, data interpretation, and drawing conclusions and recommendations. Coding was done by grouping data based on themes or categories that were relevant to the research objectives. The results of the analysis were then presented in the form of descriptive narratives that describe the research findings, including interview quotes, observation results, and questionnaire answers. Furthermore, data interpretation was carried out to understand the factors that cause difficulties in learning volleyball underhand serve, by considering physical, psychological, and teaching method aspects. Based on this analysis, the researcher drew conclusions regarding the level of difficulty experienced by students and provided recommendations for teachers and schools to overcome these difficulties in order to improve learning effectiveness.

## **Results and Discussion**

This study aims to conduct an in-depth analysis of the level of difficulty experienced by students in performing underhand serves in volleyball. The method used in this study is a qualitative method with a descriptive approach, which aims to understand and describe the problem in more detail. Research data were collected through various techniques, namely interviews, observations, questionnaires, and documentation. The data that has been obtained was then analyzed using qualitative analysis techniques including data reduction, data presentation, and drawing conclusions (National Education Standards Agency (NESAS), 2007). Data collection was carried out through in-depth interviews with physical education teachers, direct observation during volleyball learning sessions, and distributing questionnaires to students to determine the level of difficulty they experience in performing underhand serves (Indonesian Volleyball Association (IVA), 1995).

Based on the results of data analysis obtained from various data collection methods, it was found that there were a number of factors that influenced students' difficulties in performing underhand serves. The results of the observation showed that the main difficulties experienced by students included technical, physical, psychological aspects, and facility constraints. In terms of technical aspects, many students have not mastered the basic techniques of underhand serves, such as improper body position, suboptimal hand coordination, and less controlled hitting power, so that the ball often does not reach the target properly. In terms of physical aspects, several students experienced fatigue after several attempts to serve, which indicated limitations in their endurance and arm and wrist muscle strength (Arikunto, 2006). In addition, psychological factors were also an

obstacle, where several students appeared hesitant and lacked confidence when having to serve in front of their friends. This shows that social pressure in learning also plays a role in their level of success. Meanwhile, in terms of facilities, limited fields and equipment that does not meet standards are obstacles in the volleyball learning process in schools ( Department of National Education (Depdiknas)., 2003).

The results of interviews with physical education teachers revealed that most students had difficulty in mastering the basic techniques of underarm serve, especially in terms of adjusting body position and hitting the ball correctly. The teacher also stated that many students lacked confidence in serving, especially when under the supervision of their friends. In addition, limited facilities at school also became a challenge in learning, considering that the balls used did not always meet the standards that should have been, making it difficult for students to control the ball when serving. Meanwhile, the results of interviews with students showed that many of them felt confused in determining the correct body position when serving, and had difficulty in controlling the power of their strokes. Not a few students also admitted to feeling pressured and afraid of failing when they had to serve in front of their friends, which affected their success in playing (Ahmadi, 2007)

In addition to the primary findings, this study also highlights the broader implications for physical education curriculum design and pedagogical strategies. Understanding the varying levels of difficulty experienced by students in executing underhand serves reveals the necessity of adopting a more student-centered teaching approach. Each student possesses unique physical abilities, learning styles, and psychological responses, which means that a one-size-fits-all method may not be effective in helping all students develop the required skills. Therefore, educators should consider implementing differentiated instruction, where the teaching is tailored to meet the diverse needs of students. For example, students who demonstrate high levels of difficulty may benefit from slower-paced instruction, additional one-on-one guidance, or targeted drills that isolate specific skill components such as body posture, hand placement, or timing.

Moreover, the study suggests that mental and emotional readiness plays a crucial role in the learning process, particularly in activities that involve performance in front of peers. The pressure to perform correctly in a group setting can lead to performance anxiety, which in turn affects the ability to concentrate and execute skills. Teachers need to be aware of these psychological dynamics and foster a learning environment that encourages effort and progress over perfection. This could include the use of positive reinforcement, verbal encouragement, and structured opportunities for students to practice in low-pressure settings before performing in front of the class.

Another key consideration is the availability and quality of physical education facilities. The presence of outdated or insufficient equipment, such as volleyballs that do not meet standard requirements or limited court space, can hinder skill development and reduce students' motivation to engage actively. Schools must prioritize investment in appropriate facilities and equipment as part of their commitment to holistic education. Collaborations with local sports clubs, community centers, or sponsorships could serve as potential solutions to resource limitations, ensuring that every student has equitable access to quality sports education.

Incorporating peer-assisted learning could also serve as a beneficial strategy. Allowing students who have demonstrated mastery of certain techniques to mentor their peers not only

reinforces their own understanding but also promotes a sense of community and collaboration within the class. Peer modeling has been shown to be particularly effective in physical education, as it enables learners to observe proper techniques demonstrated by individuals closer to their own skill level, often making the learning process feel more relatable and achievable.

In light of these insights, it is evident that skill acquisition in physical education—such as learning to perform the underhand serve—is influenced by a complex interplay of factors. Addressing these challenges requires a multifaceted strategy that includes adjustments to teaching methods, enhancements to school facilities, and psychological support for students. When educators integrate these elements into their instructional practices, they not only improve student outcomes in specific sports skills but also foster greater engagement, confidence, and lifelong appreciation for physical activity.

Ultimately, this study underscores the importance of continuous professional development for physical education teachers, equipping them with the knowledge and tools to respond to student difficulties effectively. Workshops, peer observations, and curriculum reviews can help educators stay informed about best practices in teaching motor skills and managing classroom dynamics. As schools strive to enhance their physical education programs, prioritizing a balanced approach that addresses technical, physical, psychological, and environmental factors will be essential in nurturing students' overall development and success in sports learning.

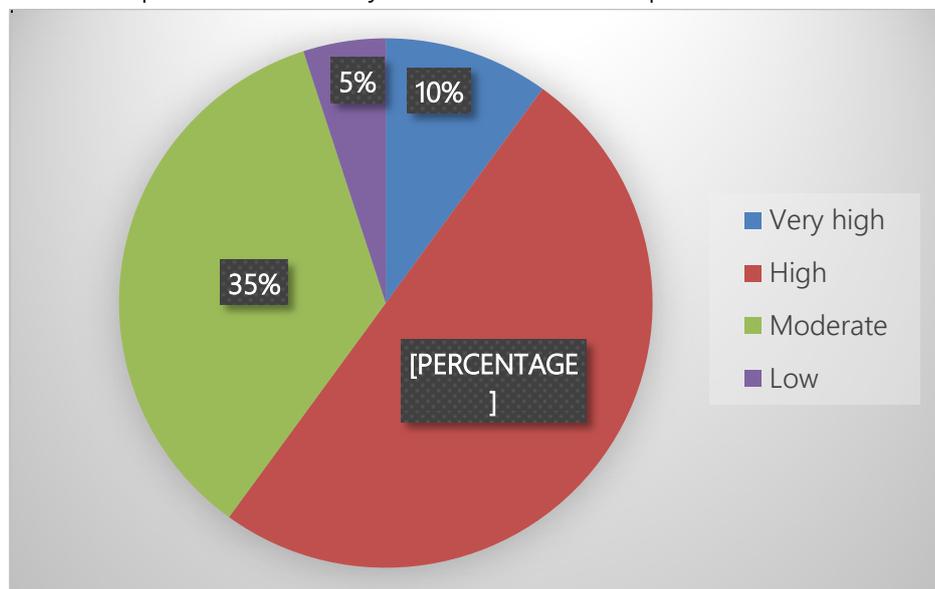
In addition, the results of the questionnaire distributed to 20 sixth grade students provide a more detailed picture of the level of difficulty they experience. The questionnaire consists of 10 statements covering four main factors, namely technique, physical, psychological, and facilities. The data obtained from this questionnaire were then categorized into four levels of difficulty, namely low, medium, high, and very high. The results of the analysis showed that most students, namely 50%, were in the high difficulty category, which means they face significant obstacles in performing underhand serves. As many as 35% of students were in the moderate difficulty category, which indicates that they already have a basic understanding, but still experience obstacles, especially in the psychological and physical aspects. Meanwhile, 10% of students were in the very high difficulty category, where they experienced complex obstacles covering all aspects tested in this study. Only 5% of students were in the low difficulty category, which means they were relatively more capable of performing underhand serves compared to other students (Sukintaka., 2023)

Table 1. Difficulty Level of Volleyball Underhand Serve

Difficulty Level	Number of Students	Percentage (%)
Very High Difficulty	2	10%
High Difficulty	10	50%
Moderate Difficulty	7	35%
Low Difficulty	1	5%
Total	20	100%

The scoring guidelines used in this study are categorized into four levels of difficulty based on the total score obtained by each student from the questionnaire. A score of 31 or above is classified as "Very High" difficulty, indicating that the student faces serious and complex challenges in performing

the underhand serve. Scores ranging from 26 to 30 fall into the "High" difficulty category, showing that students encounter considerable obstacles in several aspects. A score between 18 and 25 is categorized as "Moderate" difficulty, meaning the student has a basic understanding but still faces certain challenges. Lastly, a score below 18 is categorized as "Low" difficulty, indicating that the student experiences relatively fewer obstacles and performs the underhand serve with more ease.



The results of this study reveal a comprehensive picture of the level of difficulty experienced by sixth-grade students in performing the underhand serve in volleyball. Based on a questionnaire distributed to 20 students, which contained 10 statements related to technical, physical, psychological, and facility-related factors, the data were categorized into four levels of difficulty: very high, high, moderate, and low. The analysis showed that 50% of students fell into the high difficulty category, indicating that most of them experienced significant challenges, especially in executing the correct technique and maintaining consistency during practice. Another 35% were in the moderate difficulty category, meaning they had a basic understanding but still struggled, particularly with psychological factors such as self-confidence and physical endurance. Meanwhile, 10% of students were in the very high difficulty category, reflecting a combination of complex obstacles across all four factors—technique, physical ability, psychological readiness, and lack of supporting facilities. Only 5% of the students were categorized as having low difficulty, indicating they were relatively proficient and confident in performing underhand serves.

These findings highlight that the major contributors to student difficulties are not just technical skills, but also physical limitations, psychological barriers, and inadequate school facilities. The study suggests that to overcome these issues, a more effective learning strategy should be implemented. This includes providing more intensive and repetitive practice sessions, applying interactive and engaging teaching methods, and improving sports facilities to ensure all students have equal opportunities to practice. Moreover, attention to psychological aspects such as building students' self-confidence through positive reinforcement and supportive teacher-student interactions is crucial. By addressing both external and internal challenges through comprehensive strategies, students can gradually improve their volleyball skills and become more confident participants in physical education.

From the results of this study, it can be concluded that the difficulties experienced by students in performing underhand volleyball serves are caused by various factors, both in terms of technique, physical condition, psychological aspects, and limited facilities available at school. Therefore, a more effective learning strategy is needed, such as providing more intensive training, using more interactive learning methods, and providing more adequate facilities to improve students' ability to perform underhand volleyball serves (Rochiati., 2009). ). In addition, psychological factors such as self-confidence must also receive more attention in sports learning at school. A more personal approach and motivational support from teachers can help students overcome the fear and social pressure they face when practicing underhand serves. With the right strategy, it is hoped that students can be more confident and able to improve their skills in playing volleyball as a whole.

## **Conslusions**

Based on the results of the study with a qualitative approach and descriptive method, it was found that students had difficulty in performing underhand volleyball serves. This difficulty is influenced by four main factors, namely technique, physical, psychological, and available facilities. In terms of technique, most students have not mastered the correct body position and how to hit the ball properly. As a result, the ball often deviates and is difficult to control. In addition, limited hand and wrist muscle strength causes students to quickly feel tired after several serves. This physical factor is the main obstacle that prevents them from performing the movement properly (Muslich, 2010).

To further analyze the underlying challenges students face in performing underhand volleyball serves, it is essential to consider how the interrelation among the identified factors technical, physical, psychological, and environmental creates compounded difficulties. While each factor may independently hinder performance, their combined effects often amplify the overall challenge. For instance, a student who lacks proper technique might exert more physical energy to compensate, thereby accelerating fatigue. This fatigue can then reduce their focus and increase anxiety, creating a cycle that inhibits improvement over time.

Furthermore, the role of prior motor skill development and exposure to sports during early education cannot be overlooked. Many students may enter volleyball instruction without a strong foundation in general coordination or upper body control, which are necessary to perform effective serves. The absence of a progressive training model that builds on simpler motor skills can result in students feeling overwhelmed when introduced directly to sport-specific techniques like the underhand serve.

Another aspect that requires attention is the instructional approach and feedback mechanism used by educators. The way a teacher communicates corrections or encouragement can significantly influence a student's motivation and willingness to persist despite initial failures. Constructive feedback that emphasizes effort and progress, rather than solely focusing on correct outcomes, can build a more resilient learning mindset. Incorporating visual demonstrations, video analysis, or peer feedback systems could also help students better understand and internalize the correct movement patterns.

In addition, cultural and social dynamics within the learning environment may affect psychological readiness. In settings where physical prowess is highly valued or where peer comparisons are prevalent, students who struggle may withdraw from participation or become less responsive to instruction. Creating a safe, inclusive atmosphere where mistakes are accepted as part of the learning process is crucial to reducing fear-based barriers and enhancing student engagement.

Lastly, periodic assessment and adaptation of teaching methods can ensure that learning remains student-centered. Teachers should routinely evaluate not just the outcomes of performance,

but also student perceptions, emotional responses, and feedback regarding the learning process. This holistic perspective allows for adjustments in pacing, grouping, or instructional strategies that better align with students' developmental levels.

By acknowledging these additional layers such as foundational motor skill gaps, instructional feedback quality, socio-cultural classroom climate, and adaptive teaching educators and curriculum planners can develop more nuanced and effective interventions. These efforts are essential not only for improving technical performance in volleyball serves but also for fostering long-term physical literacy and student confidence in physical education settings.

Psychological aspects also play an important role in student performance. Anxiety and lack of confidence make many of them hesitate to serve. Fear of failure or fear of being ridiculed by peers worsens their mental condition while practicing. In addition, external factors such as inadequate facilities also become obstacles in the learning process. For example, the use of balls that are heavier than standard and the limited size of the field reduce the effectiveness of student training (Nenggala, 2007). Overall, students' difficulties in performing underhand volleyball serves are caused by a combination of technical, physical, psychological factors, and limited facilities. Therefore, a more comprehensive learning strategy is needed to overcome this problem. Improving understanding of basic techniques, strengthening physical conditions, developing self-confidence, and providing appropriate facilities can help students achieve more optimal learning outcomes in volleyball.

## Acknowledgment

The author realizes that without the support of various parties, Acknowledgements are also addressed to Ramadhany Hananto Puriana, the supervisor, and all lecturers and staff of the Physical Education Study Program, who have provided knowledge and motivation. The author's deepest appreciation goes to both parents, older sibling, and Siti Aisyah, who always provide prayers and support. Not to forget, appreciation is given to friends of the 2021 batch and students who have contributed to this research. The author realizes that this thesis is still far from perfect, so constructive criticism and suggestions are highly expected. Hopefully this work will be useful for the author and be a reference for similar research in the future.

## References

- Agus Dwi Jatmiko. (2011). *Peningkatan permainan pembelajaran bola voli melalui pendekatan Pakem pada siswa kelas VI A SDIT Alam Nurul Islam* (Fakultas I).
- Agus S. Suryobroto. (2004). *Diktat mata kuliah sarana dan prasarana pendidikan jasmani* (Fakultas I).
- Agus Susanto. (2010). *Upaya meningkatkan pembelajaran bola voli melalui pendekatan bermain dengan bola plastik pada siswa kelas IV SD Negeri 2 Rogojati Kecamatan Sokoharjo Kabupaten Wonosobo* (U. N. Y. Fakultas Ilmu Keolahragaan (ed.)).
- Ahmadi, N. (2007). *Panduan olahraga bola voli*. Era Pustaka Utama.
- Arikunto, S. (2006). *Prosedur penelitian: Suatu pendekatan praktik*. Rineka Cipta.
- Badan Standar Nasional Pendidikan (BSNP). (2007). *Kurikulum tingkat satuan pendidikan*. BNSP.
- Departemen Pendidikan Nasional (Depdiknas). (2003). *Undang-Undang Republik Indonesia No. 20 Tahun 2003 tentang Sistem Pendidikan Nasional*. Jakarta: Asa Mandiri.
- Khader, I. A., & Amin, M. J. (2014). The impact of special exercises using the (Wheatley's) strategy on learning to perform the underhand serve and reception skills in volleyball for students. *Journal of Physical Education*, 36(4), 108. [https://doi.org/https://doi.org/10.37359/jope.v36\(4\)2024.2191](https://doi.org/https://doi.org/10.37359/jope.v36(4)2024.2191)
- Marsiyem. (2008). *Perlindungan Hukum Anak dalam Perspektif HAM*. Salemba 4.
- Muslich, M. (2010). *Melaksanakan PTK (Penelitian Tindakan Kelas) itu mudah*. Bumi Aksara.
- Nenggala, A. K. (2007). *Pendidikan jasmani, olahraga dan kesehatan (Cetakan 1)*. (: Grafindo Media

Pratama (ed.)).

- Nugroho, E. (2013). *Upaya peningkatan minat melalui bermain pada siswa kelas IV SD Negeri 1 Redin Kecamatan Gebang Kabupaten Perworejo tahun ajaran 2013/2014*. Fakultas Ilmu Keolahragaan, Universitas Negeri Yogyakarta.
- Pardjono, dkk. (2007). *Panduan penelitian tindakan kelas*. Universitas Negeri Yogyakarta.
- Persatuan Bola Voli Seluruh Indonesia (PBVSI). (1995). *Jenis-jenis permainan bola voli*. PBVSI.
- Rochiati. (2009). *Metode penelitian tindakan kelas untuk meningkatkan kinerja guru*.
- Soytürk, M. (2019). Analysis of self and peer evaluation in basic volleyball skills of physical education teacher candidates. *Journal of Education and Learning*, 8(2), 256-.  
<https://doi.org/https://doi.org/10.5539/jel.v8n2p256>
- Sukintaka. (1991). *Teori bermain untuk D2 PGSD Penjaskes*. Yogyakarta. [20] Sukintaka.
- Sutikno, M. S. (2009). *Belajar pembelajaran*. Prospeet.
- Syariffudin, A. (2023). *Pendidikan jasmani dan kesehatan* (D. P. dan Kebudayaan (ed.)).
- Viera, B. L., & Ferguson, B. J. (2004). *Bola voli tingkat pemula (Monti, Trans.)*. Dahara Prize Semarang.
- Viera, B. L., & Fergusson, B. J. (2004). *Bola voli tingkat pemula*. RajaGrafindo Persada.
- Yamin, M. (2005). *Strategi pembelajaran berbasis kompetensi*. Gaung Persada Press.
- Yunus, M. (2022). *Olahraga bola voli*. Departemen Pendidikan dan Kebudayaan.