

DRILL METHODS IN SEPAK TAKRAW LEARNING FOR MIDDLE SCHOOL STUDENTS: A STUDY OF SEPAK SILA ABILITY

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ABSTRACT

This study aims to determine the improvement of sepak sila skills through the drill method in sepak takraw learning in junior high school students. This study uses an approach based on classroom action research. The sample in this study was students of Class VIII of Public Middle School Satu Atap Iwur Pegunungan Bintang, with a sample used of 32 students. The sampling technique used was total sampling. Qualitative data analysis used qualitative descriptive techniques to interpret the results of observations about the learning process. The results showed that in the first cycle of learning Sepak Takraw Sepak Sila using the drill method, the passing rate for all students was 66.67%. In the affective aspect, student motivation to participate in learning still needs to be improved, especially in the early meetings. Discipline and accuracy in performing sepak sila using the drill method still need improvement. While the average completeness value of all students was 93.75% in cycle II, only 7.34% of students had not achieved completeness. However, the learning process encountered several obstacles. In the cognitive aspect, students still have difficulty in working on questions and lack focus when working on assignments, which causes the final grade to be less than optimal. It can be concluded that there is an increase in sepak sila skills by using the drill method in sepak takraw learning among class VIII students of Public Middle School.

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1. INTRODUCTION

Physical activity in the form of sports is not only beneficial for the physical but also the spiritual development of a person (Mardiana et al., 2024; Arga, 2025). Mastery of the right and correct techniques is an important indicator in assessing the level of skill in a sport. A person is considered skilled in a particular sport when they are able to master the basic techniques well (Arga et al., 2024). Many activities in both urban and rural areas demonstrate the popularity of sepak takraw (Sulaiman, 2020). Sepak takraw is included in the category of small ball games played by two teams, with each team consisting of three players. In this game, each team tries to bounce the ball over the net with the aim of killing the ball from the opponent's kick (Azis, 2021). Some fundamental

techniques in sepak takraw include various types of kicks, such as kicking, chipping, serving, and stepping, and the techniques of grasping, chesting, shouldering, heading, smashing, and blocking (Wahyudi & Amrullah, 2023).

Sepak takraw is a cultural heritage of the ancestors of the Indonesian nation, which is now part of the curriculum for physical education and health subjects (Pramono et al., 2022; Lim, 2023). This sport, often abbreviated as "takraw," is also known as "kick volleyball" or "soccer volleyball" because it combines elements of football and volleyball (Ruslan & Jannah, 2021). Officially, this sport emerged as a sport using a net in Malaysia in 1940 (Nopembri & Saryono, 2022).

The sepak takraw game is played on a rectangular field with a length of 13.42 m and a width of 6.1 m separated by a net (Hakim & Prasetyo, 2020). Players use balls made of round woven rattan or plastic. Ahmad and Wibowo (2022) explain that this game is played by two teams with the aim of playing the ball and returning it to the opponent's area in the hope that the opponent will not be able to return it, thus earning points. When playing ball, players can use all parts of the body except the arms (Syarifuddin & Rachman, 2022). A team of three players in the tekong, left apit, and right apit positions typically plays sepak takraw (Muslimin & Faizal, 2021). The game begins with a bounce performed by the left apit or the right apit, depending on which foot the tekong will use to kick. Then the tekong kicks the rebound in a position inside the service circle (Rahadian & Susilawati, 2023). After the serve is made and the ball successfully passes over the net or enters the opponent's area, the opponent plays the ball a maximum of three times—either by a player or a teammate—to then cross it back over the net with the aim of dropping it in the opponent's area (Nurhidayat & Purnomo, 2022).

Sepak takraw is a traditional sport that is very popular in Southeast Asia, especially in Indonesia, Malaysia, and Thailand (Saputra & Wijaya, 2022; Creak & Trotier, 2024). This sport integrates elements of soccer, volleyball, and martial arts skills, where players use their feet, head, and body (except their hands) to kick a rattan ball over the net with the aim of landing it in the opponent's field area (Gunawan & Fikri, 2023). The uniqueness of sepak takraw lies in its technique, agility, and the need for high physical endurance, making it a challenging sport that requires a good level of physical fitness (Wijayanto, 2021).

From a physical education perspective, sepak takraw not only trains technical and tactical aspects but also provides significant benefits for physical development, such as: Zainal and Mardiana (2022) stated that sepak takraw involves a lot of jumping, kicking, and twisting movements of the body. These activities directly train muscle strength, especially in the legs, thighs, abdomen, and hips. Agility and flexibility: Fast movements in sepak takraw, both when kicking the ball and moving on the field, train the agility and flexibility of the player's body (Haryanto & Yuliawan, 2021). This exercise strengthens the joints and increases the body's range of motion. Eye-foot coordination and balance: Because this game requires proper coordination between the eyes and feet, as well as body balance when performing acrobatic kicks, sepak takraw players can improve their fine and gross motor skills (Irawan & Kusumawati, 2023). Cardiorespiratory endurance and fitness: Playing sepak takraw with high intensity

increases the heart rate and trains the respiratory system, which helps improve cardiorespiratory endurance (Fauzi & Permana, 2022).

Sepak takraw also has strong cultural and historical values, especially in Southeast Asian countries (Creak & Trotier, 2024). Indonesians widely recognize sepak takraw as an integral part of their ongoing cultural heritage preservation (Widodo & Santoso, 2021). In addition, sepak takraw is often played in school sports activities, local tournaments, and international competitions, which also play a role in introducing this sport to the global stage (Kurniawan & Herdiyana, 2023). Despite the many benefits of sepak takraw, schools still face challenges in implementing this sport in physical education. Pratama and Suharjana (2022) identified that several schools experience limited facilities and equipment, as well as low knowledge of the basic techniques of this game. Therefore, more intensive efforts are needed to introduce sepak takraw with easy-to-understand learning methods and create a supportive playing environment so that this sport can be more popular with the younger generation (Ramadhan & Sugiyanto, 2023).

Thus, sepak takraw is not only a means of physical exercise that is useful for improving physical fitness but also introduces the values of cooperation, dexterity, and distinctive cultural skills, making it a sport rich in physical and social benefits (Nugroho & Purwanto, 2022). For individuals to play takraw well, they must have adequate abilities and skills. The most fundamental basic technique that must be mastered in sepak takraw is the kicking technique, especially sepak sila (Ibrahim & Nasution, 2022). The Sepak Sila technique is the most dominant technique used in Sepak Takraw and is also the main foundation for receiving and weighing the ball, passing, and saving the ball from opponent attacks (Darmawan & Utami, 2021).

The drill learning approach is one of the methods often applied in learning motor skills and sports (Hidayat & Suryana, 2021; Yasriuddin et al., 2024). This approach emphasizes repeating practice to master certain skills. Drills aim to form motor habits through structured repetition so that students or learners can achieve a better level of mastery of techniques and movement automation (Mawaddah, 2022; Cahyadi & Rahmani, 2022).

In response to this, one of the alternative efforts of teachers to improve student learning outcomes is to change the learning process to activate students more, one of which is through repeated practice or drills (Rahmanto & Sukamti, 2023). Teachers or researchers choose to use the drill approach so that the teaching and learning process can take place effectively. This is because, among other things, the educational material presented is increasingly diverse and broad. Given the increasingly rapid development of science and technology, efforts are needed to adopt all advances in knowledge for the development of the learning process in the classroom (Maulana & Juliantine, 2022). It is believed that through the drill approach, student learning can be made meaningful; learning is not only applied in concepts, but students experience research, learning to find a discovery with practice that finally gets the answer (Firmansyah & Mahardika, 2023; Juhanis et al., 2024).

The problem of declining learning achievement is often caused by a lack of student learning outcomes and weak factors that make learning effective. The low learning outcomes of students in physical education and sports lessons indicate this trend (Apriyanto & Marlianto, 2022). In the context of physical education and sports, the drill approach emerged as a response to the need to develop basic skills effectively and efficiently. This approach is based on the theory that repeated and systematic practice will help increase speed, accuracy, and consistency in performing movements (Setiawan & Winarno, 2021).

The drill learning approach is very relevant in the context of developing sepak sila skills in sepak takraw games, especially for students at Middle School Satap Iwur, Pegunungan Bintang (Hartono & Jufrianis, 2023). Sepak sila is one of the basic techniques in sepak takraw that requires high motor skills, accuracy, and thorough mastery of techniques. Given the challenges in mastering these skills, a drill approach that focuses on repetition and systematic practice can be an effective solution (Mulyani & Darwis, 2022).

Sepak takraw is a sport that combines elements of agility, strength, and coordination. One of its basic techniques is sepak sila, which involves using feet to kick the ball with precision and excellent control (Rozikin & Arifin, 2023). Mastering this technique requires repeated practice, which is very suitable for the drill learning approach. The need to develop sepak sila skills in areas such as Pegunungan Bintang, which may have limited formal training facilities, makes mastery of basic techniques through intensive training crucial (Nurdiansyah & Candra, 2022). Learning sepak sila techniques through a drill approach can provide a clear and measurable training structure so that students can strengthen their skills more quickly and efficiently (Lukman & Hanafi, 2023). Sepak takraw is a traditional Southeast Asian sport that is increasingly popular in the world. In this game, technical skills such as sepak sila play an important role in determining team performance (Supriadi & Nursyam, 2022). Sepak sila is one of the most frequently used techniques in matches to receive or send the ball. Players must be able to control the ball with the inside of the foot (sila) to keep it in the air and direct it to teammates or the opponent's side (Wardani & Prasetyo, 2021).

Sepak sila is one of the basic skills that is critical in sepak takraw, which requires players to use the inside of the foot to control, receive, and send the ball (Arifin & Syamsuddin, 2022). This skill is a fundamental technique that requires excellent coordination, balance, strength, and reaction speed. Mastery of sepak sila is one of the keys to success in sepak takraw because many situations in the match require players to perform this technique accurately and quickly (Jaelani & Sumardi, 2023). The main question this study aims to answer is whether using the drill method helps improve sepak sila skills in class VIII students at public middle school Satu atap Iwur Pegunungan Bintang during sepak takraw lessons.

2. METHOD

This study uses a Classroom Action Research approach that focuses on systematically improving the learning process. Researchers chose CAR because it

enables them to witness tangible improvements in students' soccer skills by implementing the drill method (Rahayu & Firmansyah, 2021). The CAR model used adapts the concept of a repetitive cycle consisting of planning, implementation, observation, and reflection (Widayati, 2020; Kusumah & Dwitagama, 2022).

The study was conducted at Public Middle School Satu Atap Iwur, Pegunungan Bintang Regency, in October 2023. The selection of the location was based on initial findings about the low soccer skills of students at the school. The study's subjects comprised 32 students from class VIII at Public Middle School Satu Atap Iwur, selected through a purposive sampling technique. This number represents the entire class VIII population, aligning with the recommendation of Asnawi and Wijaya (2021) to include all subjects when the population is less than 100.

The research procedure follows the CAR flow with a minimum of two cycles, as in Figure 1, where each cycle includes the following four stages:

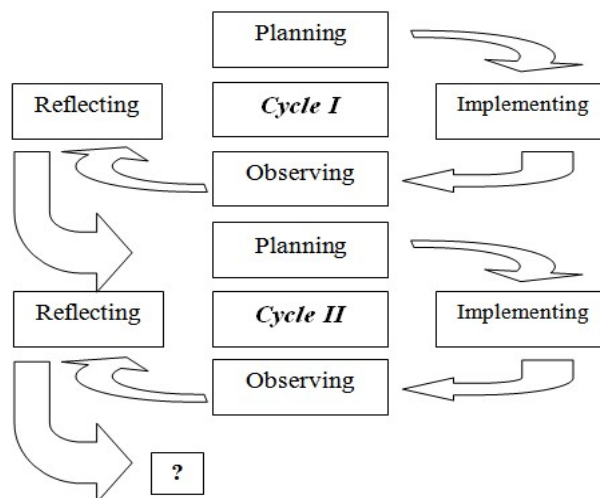


Figure 1. CAR Flowchart

Planning Stage

1. Prepare a lesson implementation plan (RPP) based on the drill method
2. Prepare an instrument for assessing soccer skills
3. Prepare supporting learning media
4. Design an observation sheet for teacher and student activities
5. Prepare indicators for the success of the action (Purnomo & Anggriawan, 2021).

Implementation Stage

1. Conduct apperception and learning orientation
2. Demonstrate the correct soccer technique
3. Organize students in practice groups
4. Apply variations of soccer drill exercises with gradual levels of difficulty
5. Provide direct feedback on student performance (Prakoso & Sugiyanto, 2022).

Observation Stage

1. Observe the learning process using a structured observation sheet
2. Document learning activities
3. Conduct a soccer skills test at the end of the cycle

4. Collect qualitative data through interviews with students (Nurhidayat & Rahayu, 2021).

Reflection Stage

1. Analyze data from observations and skills tests
2. Identify successes and obstacles in learning
3. Formulate corrective actions for the next cycle
4. If the success indicators have been achieved, the research can be stopped (Rasyid & Suherman, 2022).

Determination of learning completeness is based on the minimum completeness criteria set by the school, which is 75 (Hidayat & Ibrahim, 2023). The success of the action is determined by calculating the percentage of classical completeness, with a minimum success indicator of 75% of students achieving the minimum completeness criteria (Kurniawan & Suharjana, 2022). Qualitative data analysis uses qualitative descriptive techniques to interpret the results of observations of the learning process (Winarno & Sugiyanto, 2021). The research continues to the next cycle if the success indicator has not been achieved. This approach is in line with the CAR principle, which emphasizes continuous improvement until the expected target is achieved (Fitri & Sukoco, 2023).

3. RESULTS AND DISCUSSION

Results

Initial Data Learning Outcomes

Before conducting classroom action research, the researcher first conducts a survey or takes initial data to find out the conditions that occur in the class before providing the actions that will be given by the researcher. The following are the results of the initial data before conducting research in the class. Figure 2 presents the initial data on learning outcomes.

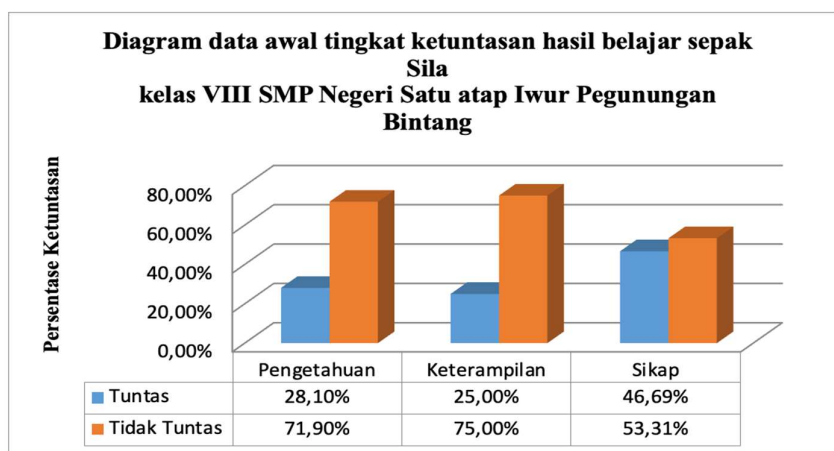


Figure 2. Initial data on the results of Sila's soccer learning

Based on the description of the percentage of initial data on the results of students' soccer learning in Figure 2 before being given the action, it indicates that it has not shown favorable results of learning soccer. Therefore, efforts or actions are needed so that the results of learning soccer in students can be improved, namely through the application of the drill method. This classroom action research will be carried out in two cycles consisting of the planning stage, the action implementation stage, the observation stage, and the reflection stage.

Learning Outcomes in Cycle I

The activities that have been carried out in the first cycle are the presentation of Sepak Sila material through the application of the drill method in Sepak Sila learning. Sepak Sila learning is carried out in three meetings; for test activities, it is carried out at the fourth meeting or by taking values for psychomotor, affective, and cognitive aspects. Figure 3 below displays the percentage of student learning completion, which is based on the learning outcomes from cycle 1.

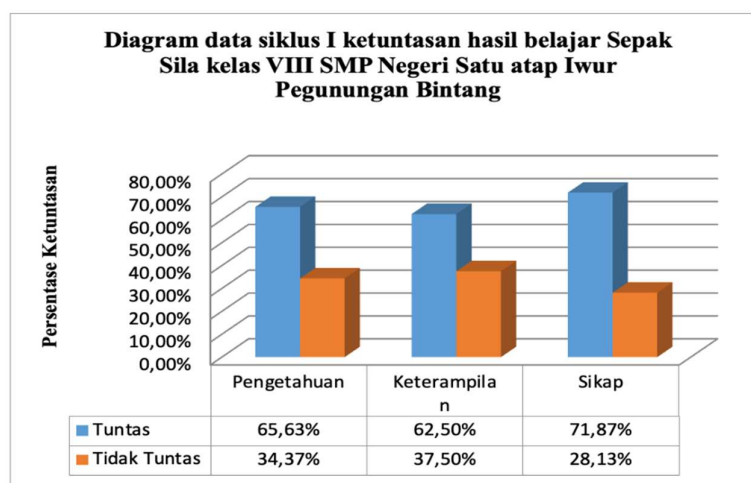


Figure 3. Learning results for cycle I of soccer

Before treatment using the drill method in Sepak Takraw, the percentage of students completing their learning was 28.10% for knowledge, 25.00% for skills, and 46.69% for attitude. After applying the method in Cycle I for the Sepak Sila material, these percentages increased to 65.63% for knowledge, 62.50% for skills, and 71.87% for attitude.

Before using the drill method in Sepak Takraw learning, 71.90% of students had incomplete knowledge, 75.00% had incomplete skills, and 53.31% had incomplete attitudes. After the first cycle, these numbers dropped to 34.37% for knowledge, 37.50% for skills, and 28.13% for attitudes. This means that the average number of students who completed all three areas improved by 66.67% during the first cycle, which took place over 3 lessons. This indicates that the number of students in the complete cycle category

has increased on average from the three aspects by 66.67% during cycle I; the completeness process occurred in 3 meetings of the learning process.

In summary, classroom action research shows that using the drill method for Sila football improved the learning outcomes of class VIII students, with an average score of 75 needed to pass and 66.67% of students achieving the objective in the first cycle. However, the increase in learning outcomes in Cycle I was not very significant; therefore, it was continued in Cycle II.

Learning Outcomes in Cycle II

In Cycle II, efforts were made to improve student learning outcomes by correcting deficiencies in Cycle I, as well as implementing a more optimal drill method to achieve a learning completion rate above 75% in all aspects of assessment (knowledge, skills, and attitudes). Figure 4 shows the learning outcomes of students in Cycle II.

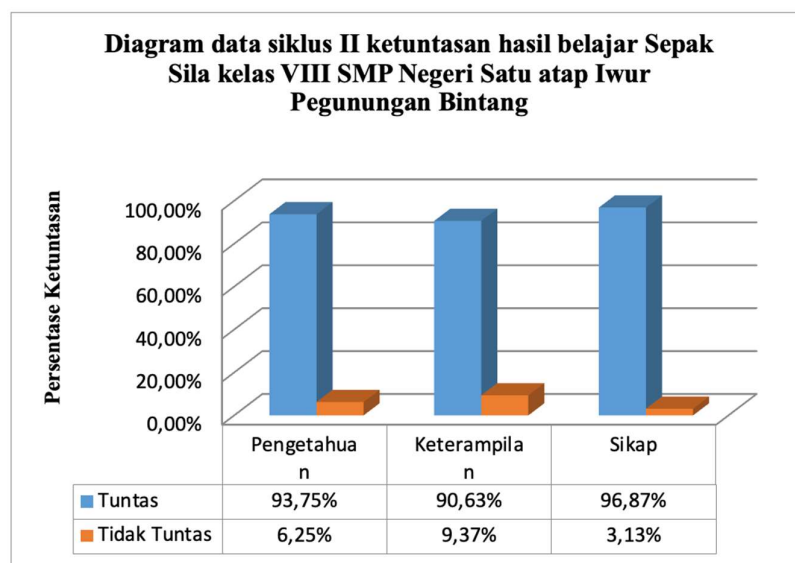


Figure 4. Results of learning cycle II of soccer Sila

Before using the drill method in Sepak Takraw learning, 65.63% of students completed their learning in knowledge, 62.50% in skills, and 71.87% in attitude. After applying the method in Cycle I for the Sepak Sila material, these percentages increased to 93.75% for knowledge, 90.63% for skills, and 96.87% for attitude.

Incompleteness the drill method in Sepak Takraw learning, 34.37% of students had incomplete knowledge, 37.50% had incomplete skills, and 28.13% had incomplete attitudes. After applying the method, these numbers dropped to 6.25% for knowledge, 9.37% for skills, and 3.13% for attitudes in the second cycle. The improvement happened over 3 learning sessions. The completion process occurred in three sessions. So, we can say that the Sila football learning using the drill method for class VIII students had an average achievement level where at least 75 was needed to pass, and in cycle II, 93.75% of all students passed.

Discussion

The application of the drill method in learning sepak takraw in the Sepak Takraw game showed a significant increase in learning outcomes in class VIII students of public middle school Satu Atap Iwur Pegunungan Bintang. The results of the study in cycle I showed an increase in three aspects of learning. In the knowledge aspect, the average score reached 77.50 with a maximum score of 100 and a minimum of 50. Students' scores on the skills component ranged from a minimum of 25 to a maximum of 94, with an average of 73.63. The attitude component had a minimum score of 2 and a maximum score of 4, with an average score of 2.91. Overall, the percentage of learning completion in cycle I reached 66.67%, indicating that 33.33% of students had not yet completed the learning objectives.

In cycle II, learning outcomes showed further improvement with a percentage of completion reaching 93.75%, and only 7.34% of students had not yet achieved completion. However, the learning process encountered several obstacles. Cognitively, students struggle with answering questions and maintaining focus on assignments, leading to suboptimal final grades. There are still shortcomings in understanding the main material of sepak sila. From a psychomotor perspective, students' movements appear rigid when performing basic sepak sila techniques, particularly during passing, where the ball-to-foot contact is still not precise. When performing Sepak Sila movements, students also exhibit doubts and fears.

In the affective aspect, students' motivation to participate in learning still needs to be improved, especially in the initial meetings. Discipline and accuracy in performing sepak sila using the drill method still need improvement. This data indicates that the achievement of learning objectives in cycle I has not been optimal. To overcome these obstacles, it is necessary to pay attention to fostering interest and motivation to learn, providing clear explanations of sepak sila material, and offering examples of proper technical practices.

According to [Çoban & Gökteş \(2022\)](#), the drill method has the main characteristics of learning that support the success of this study, namely: providing opportunities to repeat practices with observers individually, practicing tasks with immediate feedback from peers, discussing specific aspects of tasks with friends, understanding the parts and sequence of task implementation, and practicing tasks independently. The application of the drill method creates a pleasant learning atmosphere and increases student agility, which is one of the requirements for achieving the goals of physical education learning in schools ([Juhani et al., 2024](#); [Yasriuddin et al., 2024](#)).

Active learning involving students facilitates mastery of the material given by the teacher. Although this study achieved a high score of 97.75%, using the drill method to teach basic Sepak Sila techniques to eighth-grade students at public middle school Satu Atap Iwur Pegunungan Bintang has successfully improved their learning results from before to after the first and second cycles. The limited time for the study due to school administrative factors is an obstacle to achieving more optimal results, but the improvements achieved have shown the effectiveness of the methods applied.

As an implication, the drill method provides an opportunity for students to provide feedback to each other, allowing pupils to practice freely with the help of friends as observers who function as peer tutors. This approach helps students master sepak sila movements more quickly and correctly. The regular application of the drill method in Sepak Sila learning improves students' psychomotor abilities and development because it trains the muscles of the legs and other limbs, thereby increasing the ability to perform correct movements and reducing errors. As a result, learning outcomes increase in cognitive, psychomotor, and affective aspects.

4. CONCLUSION

The research and discussion show that using the drill method significantly improves sepak sila skills in class VIII students at SMP Negeri Satu atap Iwur Pegunungan Bintang during sepak takraw lessons. This result is shown based on the learning outcomes of Cycle I and Cycle II, which have increased. The percentage increase from cycle I to cycle II is 66.67% to 93.75%. The drill method gives students a chance to help each other out by giving them constructive criticism while they practice on their own with the support of friends who can act as observers and tutors. Students learn sepak sila techniques more efficiently and accurately with this method.

Teachers can use the drill method as a learning model to enhance student learning outcomes. In addition, further research is needed to develop more interactive methods for improving student learning outcomes, especially PJOK learning

REFERENCES

- Ahmad, S., & Wibowo, R. (2022). Analisis biomekanika pada teknik dasar sepak takraw. *Jurnal Pendidikan Olahraga dan Kesehatan*, 6(2), 112-124.
- Apriyanto, K., & Marlianto, F. (2022). Faktor-faktor yang mempengaruhi menurunnya prestasi belajar pendidikan jasmani. *Jurnal Kependidikan Jasmani dan Olahraga*, 4(1), 45-57.
- Arifin, Z., & Syamsuddin, M. (2022). Analisis keterampilan sepak sila dalam permainan sepak takraw tingkat SMP. *Jurnal Keolahragaan Nasional*, 7(3), 210-219.
- Arga, Arkanul Arba, M., Rahmatullah, W., Nurhalizah Mutia Aulria, S., & Tandi Rerung, C. (2024). Football Dribbling Speed Reviewed From Running Speed. *KING : Knowledge Integrated Networking for Global Sport and Health*, 1, 64–68. <https://jurnal.sainsglobal.com/index.php/king>
- Arga, A. (2025). Pengaruh Latihan Leg Raise Terhadap Kekuatan Otot Perut Mahasiswa PKO UPRI. *Jurnal Pendidikan Kepelatihan Olahraga (PEJUANG)*, 1(1), 18-23. <https://journalpejuang.web.id/index.php/jurnalpkopejuang/article/view/1>
- Azis, F. (2021). Penerapan model pembelajaran kooperatif tipe STAD dalam permainan sepak takraw. *Jurnal Pendidikan Olahraga*, 10(1), 67-78.
- Cahyadi, A., & Rahmani, M. (2022). Penerapan metode drill dalam pembelajaran keterampilan motorik: Studi literatur. *Jurnal Pendidikan Jasmani dan Kesehatan*, 5(3), 178-187.

- Çoban, M., & Göktaş, Y. (2022). Which training method is more effective in earthquake training: Digital game, drill, or traditional training?. *Smart Learning Environments*, 9(1), 23. <https://doi.org/10.1186/s40561-022-00202-0>
- Creak, S., & Trotier, F. (2024). Sport, diplomacy, and regionalism in Southeast Asia: the Southeast Asian (SEA) Games and ASEAN. *Sport in Society*, 1-20. <https://doi.org/10.1080/17430437.2024.2325971>
- Darmawan, B., & Utami, N. (2021). Analisis keterampilan sepak sila pada atlet sepak takraw junior. *Jurnal Ilmu Keolahragaan*, 9(2), 143-152.
- Fauzi, R., & Permana, D. (2022). Dampak latihan sepak takraw terhadap kebugaran kardiorespirasi siswa sekolah menengah. *Jurnal Health & Sport*, 3(2), 87-96.
- Firmansyah, H., & Mahardika, R. (2023). Efektivitas pendekatan drill dalam meningkatkan keterampilan olahraga pada siswa sekolah menengah. *Jurnal Pendidikan Kepelatihan Olahraga*, 8(1), 34-45.
- Gunawan, A., & Fikri, A. (2023). Sejarah dan perkembangan sepak takraw di Indonesia. *Jurnal Ilmu Olahraga*, 6(1), 45-56.
- Hakim, L., & Prasetyo, Y. (2020). Standarisasi lapangan dan peralatan sepak takraw di tingkat sekolah. *Jurnal Pendidikan Olahraga*, 9(1), 78-89.
- Hartono, S., & Jufrianis, T. (2023). Implementasi pembelajaran sepak takraw di daerah terpencil: Studi kasus di Pegunungan Bintang. *Jurnal Olahraga Pendidikan*, 5(2), 98-110.
- Haryanto, J., & Yulawan, E. (2021). Peningkatan kelincahan dan fleksibilitas melalui latihan sepak takraw. *Jurnal Keolahragaan dan Kesehatan*, 4(3), 201-210.
- Hidayat, S., & Suryana, D. (2021). Implementasi metode drill dalam pembelajaran pendidikan jasmani. *Jurnal Penelitian Pendidikan*, 13(2), 98-109.
- Ibrahim, R., & Nasution, A. (2022). Analisis teknik sepak sila dalam sepak takraw: Tinjauan biomekanika. *Jurnal Olahraga Prestasi*, 5(2), 122-133.
- Irawan, A., & Kusumawati, M. (2023). Pengaruh latihan koordinasi terhadap keterampilan sepak takraw. *Jurnal Ilmu Keolahragaan*, 8(1), 67-76.
- Jaelani, A., & Sumardi, K. (2023). Hubungan antara kemampuan sepak sila dengan prestasi bermain sepak takraw. *Jurnal Kepelatihan Olahraga*, 6(1), 45-56.
- Juhanis., Mappaompo, M. A., & Hasanuddin, M. I. (2024). Literature Study on Increasing Dribbling Agility Through Ball Feeling Training Methods and Ladder Drill Training. *ETDC: Indonesian Journal of Research and Educational Review*, 3(2), 172-184. <https://doi.org/10.51574/ijrer.v3i2.1512>
- Kurniawan, D., & Herdiyana, A. (2023). Strategi pengembangan sepak takraw sebagai olahraga unggulan di Indonesia. *Jurnal Sport Science and Education*, 8(1), 23-34.
- Kusuma, I., & Wahyudi, R. (2022). Penerapan metode drill untuk meningkatkan keterampilan sepak sila. *Jurnal Pendidikan Jasmani dan Olahraga*, 5(3), 167-176.
- Lim, P. H. (2023). From Sepak Raga to Sepak Takraw: The Introduction and Institutionalization of an Indigenous Game in Regional Multi-Sport Events, 1965–1990. *Asian Journal of Sport History & Culture*, 2(1), 106-123. <https://doi.org/10.1080/27690148.2023.2209075>

- Lukman, A., & Hanafi, S. (2023). Pendekatan pembelajaran keterampilan sepak takraw untuk sekolah menengah di daerah terpencil. *Jurnal Pendidikan Olahraga*, 8(1), 56-67.
- Mardiana., Badaru, B., Arfanda, P. E., Arimbi., & Hudain, M. A. (2024). Elementary School PJOK Teachers' Perceptions of the Independent Learning. *ETDC: Indonesian Journal of Research and Educational Review*, 3(3), 97-104. <https://doi.org/10.51574/ijrer.v3i3.1866>
- Maulana, A., & Juliantine, T. (2022). Inovasi model pembelajaran drill dalam pendidikan jasmani. *Jurnal Kependidikan dan Keolahragaan*, 7(2), 121-132.
- Mawaddah, N. (2022). The Drill Method for Increasing Motivation to Learn FIQH for Middle School Students. *ETDC: Indonesian Journal of Research and Educational Review*, 2(1), 10-19. <https://doi.org/10.51574/ijrer.v2i1.655>
- Mulyani, S., & Darwis, A. (2022). Pengembangan model latihan sepak sila untuk siswa sekolah menengah. *Jurnal Riset Pendidikan Jasmani*, 5(1), 78-89.
- Muslimin, A., & Faizal, R. (2021). Analisis posisi pemain dalam permainan sepak takraw. *Jurnal Pendidikan Olahraga*, 10(2), 143-154.
- Nopembri, S., & Saryono, S. (2022). Sejarah perkembangan sepak takraw sebagai olahraga resmi di Indonesia. *Jurnal Olahraga Tradisional*, 3(1), 34-45.
- Nugroho, S., & Purwanto, E. (2022). Nilai-nilai sosial dan budaya dalam permainan sepak takraw. *Jurnal Sosiologi Olahraga*, 4(2), 156-167.
- Nurdiansyah, F., & Candra, A. (2022). Model pengembangan latihan teknik dasar sepak takraw untuk daerah dengan keterbatasan fasilitas. *Jurnal Pendidikan Jasmani dan Olahraga*, 7(2), 110-121.
- Nurhidayat, A., & Purnomo, E. (2022). Analisis pola permainan sepak takraw tingkat SMP. *Jurnal Keolahragaan dan Pendidikan Jasmani*, 5(1), 56-67.
- Pramono, H., & Hidayat, A. (2022). Hubungan antara penguasaan teknik dasar dengan keterampilan bermain sepak takraw. *Jurnal Pendidikan Olahraga*, 11(1), 45-56.
- Pramono, H., Suhardi, S., & Rachman, H. A. (2022). Sepak takraw dalam kurikulum pendidikan jasmani: Tantangan dan peluang. *Jurnal Pendidikan Jasmani Indonesia*, 18(1), 45-56.
- Pratama, R., & Suharjana, F. (2022). Identifikasi permasalahan pembelajaran sepak takraw di sekolah menengah. *Jurnal Pendidikan Jasmani dan Keolahragaan*, 7(2), 189-198.
- Pratiwi, D., & Suherman, W. (2023). Peningkatan koordinasi mata-kaki melalui latihan sepak sila bervariasi. *Jurnal Olahraga Prestasi*, 6(1), 87-96.
- Rahadian, A., & Susilawati, D. (2023). Analisis gerak servis dalam permainan sepak takraw. *Jurnal Kepelatihan Olahraga*, 6(1), 78-89.
- Rahmanto, S., & Sukamti, E. R. (2023). Peningkatan hasil belajar melalui penerapan metode latihan berulang dalam pendidikan jasmani. *Jurnal Pendidikan Jasmani dan Olahraga*, 8(1), 23-34.
- Ramadhan, A., & Sugiyanto, F. (2023). Strategi pengenalan sepak takraw untuk generasi muda. *Jurnal Pendidikan Olahraga*, 8(1), 112-123.

- Rizal, A., & Hasibuan, J. (2022). Pengembangan kekuatan otot kaki melalui latihan teknik dasar sepak takraw. *Jurnal Sport Science*, 7(1), 134-145.
- Rozikin, A., & Arifin, Z. (2023). Teknik dasar sepak sila: Analisis gerakan dan metode latihannya. *Jurnal Kepelatihan Olahraga*, 6(2), 134-145.
- Ruslan, R., & Jannah, M. (2021). Perbandingan sepak takraw dengan olahraga sejenis di berbagai negara. *Jurnal Olahraga Internasional*, 4(1), 67-78.
- Saputra, D., & Wijaya, M. (2022). Profil sepak takraw sebagai olahraga khas Asia Tenggara. *Jurnal Olahraga Asia*, 5(1), 56-67.
- Saputra, Y., & Yuliani, P. (2021). Analisis ketepatan gerakan sepak sila pada pemain pemula. *Jurnal Ilmu Kepelatihan*, 6(2), 178-187.
- Setiawan, A., & Winarno, M. E. (2021). Teori latihan repetisi dalam pengembangan keterampilan olahraga. *Jurnal Pendidikan Jasmani dan Olahraga*, 6(1), 76-87.
- Sulaiman, A. (2020). Perkembangan permainan sepak takraw di Indonesia. *Jurnal Olahraga Indonesia*, 16(2), 123-134.
- Supriadi, D., & Nursyam, A. (2022). Peranan sepak sila dalam menentukan kemenangan tim sepak takraw. *Jurnal Analisis Olahraga*, 7(2), 201-212.
- Syarifuddin, M., & Rachman, H. A. (2022). Analisis gerakan tubuh dalam teknik dasar sepak takraw. *Jurnal Biomekanika Olahraga*, 4(1), 78-89.
- Wardani, S., & Prasetyo, Y. (2021). Analisis teknik sepak sila pada atlet junior dan senior. *Jurnal Kepelatihan Olahraga*, 4(2), 155-166.
- Wahyudi, R., & Amrullah, H. (2023). Teknik-teknik fundamental dalam sepak takraw: Analisis dan metode latihannya. *Jurnal Pendidikan Olahraga*, 8(1), 78-89.
- Wibowo, A., & Kurniati, D. (2023). Model latihan sepak sila untuk meningkatkan akurasi tendangan. *Jurnal Keolahragaan Pendidikan*, 6(1), 78-89.
- Widodo, S., & Santoso, B. (2021). Pelestarian sepak takraw sebagai warisan budaya Indonesia. *Jurnal Antropologi Olahraga*, 3(2), 145-156.
- Wijayanto, A. (2021). Analisis kebugaran jasmani pemain sepak takraw tingkat remaja. *Jurnal Kesehatan Olahraga*, 9(1), 56-67.
- Yasriuddin., Nur, M., Gunawan, M. R., Fahrizal., & Hudain, M. A. (2024). The Pressure of Smash Training Using the Drill Method for Male Athletes' Volleyball Smash Skills. *ETDC: Indonesian Journal of Research and Educational Review*, 3(3), 158-165. <https://doi.org/10.51574/ijrer.v3i3.1904>
- Zainal, M., & Mardiana, A. (2022). Pengaruh latihan sepak takraw terhadap kekuatan otot tungkai. *Jurnal Sport Science*, 5(2), 112-123.
- Zulkifli, M., & Mahmud, B. (2022). Evaluasi performa teknik sepak sila pada atlet sepak takraw tingkat sekolah. *Jurnal Pendidikan Jasmani dan Olahraga*, 7(3), 234-243.