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Efforts to Improve Volleyball Under Passing Using Modified Balls

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Abstract. This study aims to improve students' ability in performing the underhand passing technique in volleyball through the application of modified ball learning media. The research employed classroom action research (CAR) following the Kemmis and McTaggart model, conducted in two cycles consisting of planning, action, observation, and reflection stages. The subjects of the study were 20 students from class X at Umbulsari Senior High School, Jember. Data were collected through tests and observations on students' underhand passing skills during the learning process. The results showed that in the first cycle, 13 students (65%) achieved the minimum mastery criteria (KKM = 70), while in the second cycle, the number increased to 17 students (85%). This indicates that using modified balls as a learning medium can significantly improve students' volleyball underhand passing skills. The use of varied and engaging learning designs enhances students' motivation, participation, and skill acquisition in physical education, particularly in volleyball basic techniques.

Keywords: modified ball; underhand passing; volleyball; learning media; classroom action research



INTRODUCTION

The concept of a physical education teaching model as an alternative in PJOK learning needs to be considered and implemented in schools, considering that each of these models, each has its own advantages and suitability to school conditions schools in Indonesia (Magdalene 2024). Sports in schools are seen as an educational tool that has an important role in achieving overall teaching and learning goals (Batiurat 2023). Education physical is Wrong One lesson mandatory which is implemented in various level school, start From elementary school, middle school, to high school/vocational school (Mustafa 2022). In physical education learning, a teacher must have a strategy in learning so that the learning given to students can be understood. (Heru 2020). Physical education is one of the subjects taught in schools from elementary to high school through physical activities, in addition to that, physical education can also attract students' attention to adopt a healthy lifestyle. The sport that is one of the materials taught in junior high schools (SMP) is volleyball. School is one of the right places to learn about the game of volleyball with the correct techniques. (Prayoga 2017).

In physical education, a teacher must have a strategy to ensure the lesson is understandable to students. The primary issue facing students is the process of changing their behavior through the various learning experiences they receive. Various problems frequently arise in the physical education learning process (Mathematics 2018). Physical education is an integral part of overall education that contributes to individual development through the medium of physical activity of natural human movement. (Nugraha 2015). Schools are seen as an educational tool Sports that have an important role in achieving goals from something overall learning . as an educational tool, Sport physical and is a compulsory subjects taught in Elementary School (SD), Middle School (SMP), General High School (SMU), and Vocational High School (SMK).

Physical education is education carried out through physical activities which are an integral part of education as a whole, aiming to develop aspects of physical fitness, critical thinking skills, motor skills, critical thinking skills, social skills, emotional stability, moral actions, aspects of healthy lifestyles and introduction to a clean environment through selected physical, sports and health activities which are planned systematically in order to achieve the goals of physical education (Batiurat 2023). A one

of the competency standards for this action research, the researcher applies modified ball learning media for use in learning with practicing the basic technique of underhand passing in volleyball. It has been explained in a way It is clear above that the researcher conducted action research as an effort to improve the process and results of learning to practice basic underhand passing techniques using modified ball learning media (Rihatno 2018).

Physical Education, Sports, and Health Subject for Grade X Semester 1 of Middle School on Umbulsari namely. Practicing various variations of basic movements into games and sports with modified games and the values contained therein. volleyball game underhand passing . Obstacles in physical education subjects In the material on underhand passing in volleyball, there are still many students who do n't understand it. can practice the basic technique of underhand passing according to the stages of underhand passing technique . With the results of the analysis of the causes cannot be used for learning in practicing the basic technique of underhand passing in volleyball for class X students Umbulsari Senior High School Jember. Teachers as educators interact with students who have diverse potential. Education plays a crucial role in a person's life, as it can influence the development of their personality and overall well-being. The goal is to achieve quality through the development of quality human resources that can face the challenges of the globalization era (Pandaleke 2024).

Researchers try to choose a quick and appropriate solution for the method easy method accepted And easy For practiced by improving the learning process through action research. In its implementation Action Research is essentially a systematic activity or process for solving problems, carried out using scientific methods. Many experts have expressed understandings or definitions of action research. In this research, the activity involves collecting and developing variables, then manipulating them in the hope of finding the best formula for implementing learning (Wahyudi 2025). That action research is a way or method that emphasizes social practice as a systematic improvement action for quality in improving learning that involves good cooperation to get answers to students' needs with the development of the times.

Action research Class is a systematic approach to investigation that enables people to find effective solutions to the problems they face in everyday life . Sequence in A action A behavior learning including : (1) action research is basically reflective,

(2) carried out by the actor, (3) carried out to improve the quality of learning, (4) carried out systematically, (5) is situational and contextual, (6) carried out to solve problems, (7) examines the steps for solving the problem itself, and (8) improves the learning process repeatedly or cyclically. that learning where we see, for example, that we cannot assume that students will immediately or automatically be able to take on roles such as those of trainers or officials.

In sports, students must take physical education subjects at school. One of the subjects taught at school is physical education, where this material is physical and health material that is closely related to sports (Simbolon 2022). Learning media is the process of changing behavior due to experience. While learning is the process of changing behavior, it can mean something that can be seen such as walking, running, swimming, shooting, or even something that cannot be seen such as thinking, behaving, and feeling. The use of creative learning media can enable students to remember more of what they learn and improve student skills according to the desired goals. Educational objectives require learning facilities or media as supporting tools in teaching and learning activities (Sodikin 2020). Students sometimes struggle to master the material or engage in other learning activities. This occurs because they are unable to focus on the teacher's presentation of the material. (Sulistiadinata 2020).

Learning media is essentially a means of conveying information from the teacher communicator. to student communicants as a recipient. If the learning environment is designed systematically, it will be able to achieve learning objectives optimally (Saleh 2023). Learning media is a communication tool and source of information that conveys messages for a learning purpose. Modification in Learning Modification is an approach in Physical education learning that fosters enjoyment, physical skills, and enriched movement in children. To achieve these demands, teachers need to optimize students as the center of learning and utilize various learning tools and media. (Fatchur 2023).

Learning should reflect the characteristics of the physical education program, efforts to change or adapt, modification is an effort made by creating and presenting something new, renewable, unique, and interesting. Modification here refers to the creation, adjustment and display of a means and renewable infrastructure for a physical education teaching and learning process. The goal from A modification in physical education learning includes : (1) students gain satisfaction in participating in learning,

(2) increasing the possibility of success in participating, and (3) students can perform movement patterns correctly.

Volleyball has become a popular sport. Understanding the rules is essential for playing well (Bumburo 2023). Indonesian society from the lower classes to the upper classes is seen in the many inter-school competitions. Students for the sport of volleyball which is held at regional to national level, volleyball is a popular game which is easy for everyone to do, because in the popular game of volleyball, proper coordination of movements can be relied on to carry out all the movements in it. a volleyball game, a sport game played by two opposing groups.

In the sport of volleyball, there are several basic techniques that can be learned, including serving, passing, smashing and blocking. Each of these basic techniques has a different function. The volleyball game procedure is a popular sport among those who have developed it based on practice and aim to find solutions, a particular movement problem in the most economical and useful way, playing volleyball will develop element element Power mind, ability, and feeling. Volleyball is a team sport, so players must work together and support each other to form a cohesive team (Keswando 2022).

It can be concluded that passing is one of the basic techniques in volleyball. For beginners, volleyball learning focuses on mastering the dominant passing technique, both for offense and defense. Passing under the ball is one of the basic techniques in volleyball. Passing in volleyball is the term for the first way to play the ball after the ball is in play due to an opponent's attack, opponent's serve . So that To be able to do a good pass, good skills and physical abilities are required, so that the results of the pass we do can be done optimally. Passing underhand is also used to block attacks or hard hits from the opponent. This includes receiving serves, smashes, or attacks from the opponent, retrieving the ball after a block or rebound from the net, saving a ball that bounces out of the court, and receiving a low ball that comes suddenly (Irwanto 2021).

Lack of mastery of the basic underhand passing technique in volleyball will impact the outcome of the match. Because passing is the starting point for building an attack, good underhand passing is essential (Akhmady 2022). The player's ability to move efficiently will determine the success rate of the underhand pass, which is a movement to pass the ball using a certain technique to a teammate. The underhand pass technique in volleyball is a very important technique and must be mastered by volleyball players.

Underhand passing is the most important part of the volleyball game, because without mastering the passing technique, then No will can play the ball properly.

METHOD

The method used in this research is Classroom Action Research PTK (Priyadi 2021). Or methods used in This study uses action research with the aim of improving students' skills in practicing basic volleyball underhand passing techniques through modified ball learning media for student X. Umbulsari Senior High School Jember. The research refers to action research. The class that describes self-reflection in the spiral cycle is (1) planning change; (2) acting and observing the process and consequences of change; (3) reflecting on the process and consequences; (4) re-planning; (5) acting and re-observing; (6) reflecting. This action research is carried out in several cycles if in the first cycle the students are still unable to practice the basic technique of passing underfoot in volleyball. With the predetermined learning objectives have not been achieved.

The data used in this study is data which describes the improvement in skills of class X students Umbulsari Senior High School In Jember, in learning the basic techniques of underhand passing in volleyball , this research uses quantitative methods. In addition , data also quantitative in the form of test results movement basic technique of passing under , data from observations during the implementation of the action. This study uses two data collection techniques using Test and non-test techniques. Test techniques are skills tests conducted to determine students' abilities in the material presented. Tests are administered at the final stage of volleyball learning. Data are collected before and after cycle II.

RESULTS AND DISCUSSION

Cycle . I

After carrying out treatment in cycle I, the results obtained were data table 1.

Table 1. Distribution of Results of Underhand Passing Skills in Volleyball Cycle I

No	Range Score	Frequency	Percentage
1	58-62	6	30%
2	63-67	1	5%
3	68-72	0	0%
4	73-77	9	45%
5	78-82	0	0%
6	83-87	4	20%
Amount		20	100%

Based on the data above, it can be stated that 13 students (65%) completed the course and 7 students (35%) did not complete it. After carrying out activities on A learning then calculates the research data, teachers and observer with carry out reflection and discussion of problems related to actions that have been carried out by a teacher. Then in cycle I this still has shortcomings from both teachers and students student That Alone . The learning results in the first cycle show that the ability to pass under the volleyball ball has not reached the expected target, yes that's it. mark KKM 70. With Thus , during the learning process in the first cycle, there was an increase in students' motivation and desire to learn volleyball underhand passing. At this stage, students were able to practice each movement in the volleyball underhand passing technique. However, the researcher still hopes that these results can be further improved to reach the target. in accordance with KKM .

Cycle . II

Table 2. Distribution of Results of Underhand Passing Skills in Volleyball Cycle II

No	Range Score	Frequency	Percentage
1	67-71	3	15%
2	72-76	5	25%
3	77-81	0	0%
4	73-77	7	55%
5	82-86	5	25%
Amount		20	100%

Data on research result In cycle II, it can be concluded that 17 students (85%) completed the course and 3 students (15%) did not complete it. show increase in the number of students who successfully complete and meet the criteria Minimum Completion (KKM = 70), as many as 17 students completed 85% of the minimum score of 70 out of 20 students. There were 3 students who did not complete the test (15%). On In the data , there are 2 students who did not complete it, but their scores have almost reached the completion point, namely (KKM 75).

CONCLUSION

Learning using modified balls and learning designs made by paying attention to student characteristics can improve learning outcomes in volleyball underhand passing in class X students. Umbulsari Senior High School Jember academic year 20 24 /20 25 . Characteristics of class X students Umbulsari Senior High School was still in existence

during the period happy to play although age they Already high school period . By utilizing various games as learning techniques, student X 's abilities Umbulsari Senior High School In the 2024/2025 academic year, practicing the volleyball underhand passing technique , increased student seen motivated in activity learning .

Implementation modified ball media learning in learning process activities volleyball underhand passing skills packaged in such a way can produce better learning outcomes, because students feel enthusiastic and passionate in participating in volleyball underhand passing learning for class X students at Umbulsari Senior High School Jember . There is data obtained in the pre-cycle, cycle I and cycle II, there was an increase in each cycle. Where in the pre-cycle there were 4 students who achieved the KKM score, it can be interpreted that 4 students completed it. In the first cycle, 13 students completed it, or 65%. And on cycle to II increase to 85 % learning with using a modified ball and attractive learning design can increase skills base passing lower student X Umbulsari Senior High School Academic year 20 24 / 20 25 .

REFERENCE

- Akhmady. 2022. "Hubungan Koordinasi Mata-Tangan Dengan Kemampuan Passing Bawah Pada Tim Bolavoli Putri STKIP Kie Raha Kota Ternate." *Jurnal Ilmiah Wahana Pendidikan* <https://jurnal.unibrah.ac.id/index.php/JIWP> 8(3): 178–83. <http://jurnalmahasiswa.unesa.ac.id/index.php/jurnal-penelitian-pgsd/article/view/23921>.
- Batiurat. 2023. "Modifikasi Permainan Bolavoli Dalam Pendidikan Jasmani." *Multilateral : Jurnal Pendidikan Jasmani dan Olahraga* 22(4): 272.
- Bumburo. 2023. "Permainan Bola Voli: Sebuah Tinjauan Konseptual Volleyball Game: A Conceptual Overview." *Multilateral : Jurnal Pendidikan Jasmani dan Olahraga* 22 No.4(4): 38.
- Fatchur. 2023. "Peningkatan Keterampilan Passing Bawah Peserta Didik Dalam Permainan Bola Voli Melalui Metode Drill Dengan Bantuan Alat Modifikasi Bola Gantung." *Jurnal Mahasiswa Pendidikan Olahraga* 3(2): 52–68.
- Heru. 2020. "Meningkatkan Keterampilan Passing Atas Bola Voli Melalui Media Pembelajaran Menggunakan Alat Bantu Improve Volleyball Passing Skill Though Learning Media Using Assistive Devices." *Journal of Physical and Outdoor Education* 2(2): 207–20.
- Irwanto. 2021. "Passing , Pengumpan Dan Serangan Pada Permainan Bolavoli." *Prosiding Seminar Nasional IPTEK Olahraga* (22): 6–9.
- Keswando. 2022. "Survei Keterampilan Teknik Dasar Atlet Bola Voli." *Jurnal Porkes* 5(1): 168–77.
- Magdalena. 2024. "Konsep Model Pembelajaran." *Sindoro Cendekia Pendidikan* 3(1): 41–55.
- Matematis. 2018. "Penerapan Model Pembelajaran Multiliterasi Untuk Meningkatkan

- Kemampuan Literasi.” 10(2): 117–24.
- Mustafa. 2022. “Peran Pendidikan Jasmani Untuk Mewujudkan Tujuan Pendidikan Nasional.” *Jurnal Ilmiah Wahana Pendidikan* 8(9): 68–80.
<https://jurnal.peneliti.net/index.php/JIWP/article/view/1720>.
- Nugraha. 2015. “Pendidikan Jasmani Olahraga Usia Dini.” *Jurnal Pendidikan Anak* 4(1): 557–64.
- Pandaleke. 2024. “Pengaruh Penerapan Gaya Mengajar Komando Terhadap Gerak Dasar Menggiring Bola Menggunakan Kaki Bagian Dalam Pada Permainan Sepak Bola Pada Siswa Kelas Viii Smp Negeri 4 Ratahan.” *Jurnal Olympus* 4(2): 316–23.
- Prayoga. 2017. “Upaya Meningkatkan Hasil Belajar Servis Bawah Bola Voli Melalui Penggunaan MOodifikasi Bola.” *Jurnal SPORTIF : Jurnal Penelitian Pembelajaran* 2(1): 1. <http://ojs.unpkediri.ac.id/index.php/pjk/article/view/652>.
- Priyadi. 2021. “Efektivitas Penerapan Model Problem Based Learning Terhadap Peningkatan Hasil Belajar Bola Voli.” *Physical Activity Journal* 3(1): 41.
- Rihatno. 2018. “Peningkatan Keterampilan Passing Bawah Bola Voli Melalui Media Pembelajaran Bola Modifikasi.” *Gladi Jurnal Ilmu Keolahragaan* 9(1): 48–55.
- Saleh. 2023. “Media Pembelajaran.” : 1–77.
<https://repository.penerbiteureka.com/publications/563021/media-pembelajaran>.
- Simbolon. 2022. “Pengaruh Minat Olahraga Terhadap Hasil Belajar Siswa Kelas V Pada Mata Pelajaran Pendidikan Jasmani.” *Jurnal Dunia Pendidikan* 2(2): 28–32.
- Sodikin. 2020. “Modifikasi Bola Plastik Sebagai Media Pembelajaran Bola Voli.” *Sparta* 2(2): 26–31.
- Sulistiadinata. 2020. “Meningkatkan Keterampilan Passing Atas Bola Voli Melalui Media Pembelajaran Menggunakan Alat Bantu.” *Jpoe* 2(1): 23–35.
- Wahyudi. 2025. “Jurnal Pendidikan Dan Pengajaran.” *Jurnal Pendidikan dan Pengajaran* 51(2): 93–109.
<https://ejournal.undiksha.ac.id/index.php/JPP/article/view/12795/pdf>.