

Improved Service Learning Outcomes Using D'volleyball Learning Application

Destriani^{1*}, Destriana², Ahmad Richard Victorian³, Hartati⁴, Wahyu Indra Bayu⁵, Herri Yusfi⁶, Okky Putra Alwin⁷

^{1,2,3,4,5,6}Physical education and Health Sciences Universitas Sriwijaya, Jl. Raya Palembang - Prabumulih Km. 32, Indralaya, 30662, Indonesia

¹destriani@fkip.unsri.ac.id*; ²destriana@fkip.unsri.ac.id; ³richardvictorian@fkip.unsri.ac.id, ⁴hartati@fkip.unsri.ac.id, ⁵wahyu.indra@fkip.unsri.ac.id, ⁶herriyusfi@fkip.unsri.ac.id⁷
Okkypratama1718@gmail.com

* corresponding author

ABSTRACT

This study aims to determine the improvement of service learning outcomes for high school students using the D'Volleyball Learning Application learning media at Senior High School No 1 Indralaya Utara. This learning application can be accessed via the link <https://play.google.com/store/apps/details?id=com.dvolleyball.learning> or on the play store by searching for D'Volleyball Learning Application. This D'Volleyball Learning Application contains various features regarding volleyball game material, assignments, learning videos, and assessments. This study uses a classroom action research method, with the number of research subjects as many as 22 class XII students at Senior High School No1 Indralaya Utara. This research uses the type of classroom action research conducted in two cycles. Data collection techniques used in this study were tests and observations. Each cycle has four stages, namely planning, implementation, observation, and reflection. The research subjects were 22 students including 10 female students and 12 male students. The results in this classroom action research obtained data on the initial conditions or pre-cycle of 36.4% of students completed, and 63.6% incomplete, then the results of the first cycle of student learning outcomes amounted to 63.6% with complete criteria, and amounted to 36.6% did not complete, then the results of the research in cycle 2 increased by 36.6% so that all students completed learning in cycle 2. So the conclusion is that the D'Volleyball Learning Application can improve the service learning outcomes of volleyball for class XII students at Senior High School No 1 Indralaya Utara.

Keywords: improvement, learning outcomes, over serve, volleyball, application

ARTICLE INFO

Article History:

Accepted : 20th October 2022
Approved : 30 November 2022
Available Online November 2022

Correspondence Address:

Destriani
Physical education and Health Sciences Universitas Sriwijaya
Jl. Raya Palembang - Prabumulih Km. 32, Indralaya, Indonesia
destriani@fkip.unsri.ac.id

INTRODUCTION

The whole world and especially the country of Indonesia is no longer experiencing a pandemic, a pandemic that has occurred in various parts of the world for a long time, namely from March 2020 to the beginning of 2022, because the pandemic has made many changes in various sectors of life. During the pandemic in the education sector, the Minister of Education directed that all learning activities be carried out using distance learning. In the era of technological advances, educators should have the ability to master the field of technology, because teachers are required to be able to manage classes well and efficiently, teachers who are able to master technology indirectly have a role in advancing the world of education. Education cannot be separated from the word learning. Learning is an effort made by students in achieving curriculum goals (Nafrin & Hudaidah, 2021), then education according to

(Tryanasari et al., 2017) is a process that can influence students in adapting themselves to their environment, and can cause useful changes in learning. community life. Many expert opinions regarding the meaning of education are in line with (Conference & Hosted, 2022), (LESILOLO, 2019) which explains that education is a conscious and planned effort to gain knowledge.

Education in general has the aim of educating the nation's life, for all citizens, including physical education and health or sports education, is one of the tools or containers used to achieve educational goals in general. Physical education according to (Lengkana & Sofa, 2017) The development of science and technology also has an impact on the development of physical education in the State of Indonesia, this can be seen by the low public attention to the importance of physical education for children. (Bangun, 2016) physical education is a subject that in the learning process prioritizes activities, skills, to develop abilities, attitudes, and psychomotor in students. The lack of interest and motivation in students' learning in participating in volleyball lessons, especially under passing. So students prefer other sports. The problem that is the center of attention in this study is whether down volleyball learning with a hanging ball can increase volleyball learning motivation in class (Purnomo et al., 2022).

(Pane & Darwis Dasopang, 2017) learning is essentially a process, which is where the process of regulating, organizing the environment around students so that it can grow and encourage students to carry out the learning process. (Sriwijaya & Tangerang, 2022) The use of learning media using the Powtoon application can improve learning outcomes in one of the basic techniques in badminton. To support physical education and health learning activities, a media is needed that can provide the learning needs of students at home. The chosen problem must also be related and believed to be able to build students' concepts on the material to be delivered in the learning (Utami et al., 2022). The development of varied learning techniques can help educators to design learning creatively so that the learning process becomes innovative, interesting, more qualified and can improve student learning outcomes (Destriani et al., 2019), according to this, learning media is needed that can improve student learning outcomes. Physical education learning consists of various kinds of material including the big ball game in volleyball. In the introduction to the school environment conducted by students of the Physical Education and Health Study Program at Senior High School No 1 Indralaya Utara on volleyball material, it was found that some of the class XII students had not been able to perform the top service with the correct technique, so that the service results were not yet

available. arrived in the opponent's area and the direction of the ball was not as desired.

Based on the opinion (Azizah, 2021), classroom action research is a scientific activity carried out by teachers in the classroom by using actions to improve the quality of learning. In addition, classroom action research also aims to improve the professionalism of a teacher. So, classroom action research is very important to be carried out by teachers. (Hartati et al., 2018) research conducted using macroflas media in improving student learning outcomes in learning physical education, sports and health. So to improve learning outcomes, it is necessary to give action to the class that gets obstacles. The use of appropriate learning media can help reduce problems when learning, D'Volleyball learning Application is an application for volleyball learning that can be used in learning which contains all learning materials related to volleyball games, learning videos, and assessments so that it is expected to be able to reduce barriers to students and improve learning outcomes, especially in the bottom serve technique, so it is necessary to do research with the title of improving bottom service learning outcomes using the D'Volleyball Learnig Application.

This research was conducted with the aim of improving service results using the D'Volleyball Learning Application for class XII students of Senior High School No 1 Indralaya Utara. The benefit of this research is that it can improve learning outcomes on volleyball material, especially the basic technique of serving down, so that it can improve the quality of learning ball material.

METHODS

The research method used in this research is classroom action research. This research was conducted in the odd academic year 2022/2023 at the beginning of October 2022. The subjects in this study were 20 class XI students of Senior High Schools No 1 Indralaya. The data collection techniques used in this study were tests and observations. Each cycle has four stages, namely planning, implementation, observation, and reflection. The four stages are carried out with the following series of activities:

- a) Planning, before carrying out classroom action research activities, the things that must be prepared are: 1. Prepare the syllabus, learning objectives, assessment system and prepare learning scenarios contained in the lesson plans regarding learning materials 2. Prepare observation formats, test kits and other instruments to find out the achievement of service learning outcomes on volleyball in the basic competencies studied. 3. Prepare learning

resources in the form of researched learning materials and source books. 4. Develop learning scenarios using D'Volleyball Learning Application media.

- b) Implementation, implementation of Physical Education learning activities with the D'Volleyball Learning Application media, the teacher will plan two learning cycles. The stages in each cycle are as follows: 1. Perform apperception and provide motivation to direct students to enter the Competency Standards and Basic Competencies which will be discussed along with students who are doing internships. 2. Explaining the learning objectives that must be achieved by students after the learning process ends. 3. Presenting learning materials. 4. The teacher gives a service test on volleyball to students. 5. Provide evaluation.
- c) Observations, observation steps and observations carried out in this study are: 1. Observing the process of implementing service learning on volleyball using D'Volleyball Learning Application to students. 2. Observing and assessing student learning outcomes
- d) Reflection, reflection is done after the observation activity, the data obtained will be processed based on the type of data and research needs. The description obtained from this activity will then be reflected by the teacher in carrying out further learning. The data obtained were analyzed by calculating the frequency of students who answered correctly each given question, then the average learning outcome at the end of the cycle was calculated. To find out an increase in student learning outcomes is a way to compare the averages obtained from the previous cycle.

The test was used to obtain data about the level of understanding of students in volleyball learning. The test used is the cognitive and psychomotor domains in the form of multiple choice questions as many as 10 questions and performs a bottom service test, then done individually which aims to determine the ability of students in volleyball learning, especially in the bottom serve technique. The test is carried out after learning by using the D'Volleyball Learning Application. Observations were made using observation sheets on activities in the learning process to look at the affective domain. Analysis of the data in this study was to see the improvement in learning outcomes for underserving using the D'Volleyball Learning Application. The next stage is reflection activity. The data analysis technique used is test data analysis, assessment of learning completeness, and analysis of observational data.

The success of an action is marked by an increase in learning outcomes. If the cycle shows the completeness of student learning outcomes has reached 80% with the minimum completeness criteria at Senior High School No 1 Indralaya Utara, namely 73, then this cycle is considered successful, and if the learning outcomes have not reached the completeness of

the minimum criteria, it needs to be continued in the next cycle. Analysis of test data using learning outcomes determined from the COMPLETENESS OF THE MINIMUM CRITERIA score, which is 73. If the student's score has reached the completeness of the minimum criteria, it can be stated that the actions that have been taken have been successful.

Table 1. Criteria For Complete Learning

| No | Test Score | Criteria |
|----|------------|------------|
| 1 | 73-100 | Complete |
| 2 | 0-72 | Unfinished |

Source: Criteria Of Indralaya Utara

RESULTS AND DISCUSSION

The results of classroom action research conducted by teachers and student apprentices conducted in the odd semester of the 2022/2023 academic year class XII IPS 2 with 22 students consisting of 10 students and 12 students. The learning media used in classroom action research is D'Volleyball Learning Application. The results of the initial or pre-cycle test were obtained by giving questions to see cognitive abilities, and performing a service test to see abilities in the psychomotor domain, as well as observations during activities to see affective values in students.

Results

Data on the initial conditions of students were obtained from tests conducted to see the cognitive and psychomotor domains, for the affective domain it was carried out by observing during volleyball games. Data on the initial condition of the service results can be seen in table 2 below:

Table 2. Initial Conditions of Upper Service Learning Outcomes

| No | Value | Frequency | Percentage (%) | Description |
|----|---------------|-----------|----------------|-------------|
| 1 | $\geq 73-100$ | 8 | 36,4 | Complete |
| 2 | < 73 | 14 | 63,6 | Unfinished |

Based on the table of the initial conditions of learning outcomes, the students' mastery scores were 36.4%, with the number of students who completed as many as 8 people and those who had not completed as many as 14 people with a percentage of 63.6%. This data is obtained through the results of tests on the cognitive aspect, then a test of top service skills, then also observations in the affective domain, so that from when the domain is obtained the results of

each student, after getting the results of the three domains, then after that they are averaged, so that the score is obtained. like table 2 above. So based on these results, it is necessary to make improvements using the D'Volleyball Learning Application media for students. Furthermore, it can be seen in table 3 following the results of learning the following services:

Table 3. Service Learning Outcomes for Cycle 1

| No | Value | Frequency | Percentage (%) | Description |
|----|---------------|-----------|----------------|-------------|
| 1 | $\geq 73-100$ | 14 | 63,6 | Complete |
| 2 | < 73 | 8 | 36,6 | Unfinished |

Table 3 above in cycle 1, it was found that 14 students scored in the range of 73 to 100 who were included in the category of complete scores according to the minimum completeness criteria with a percentage of 63.6%, and as many as 8 students with scores below 73 below the criteria value. minimum completeness with a percentage of 36.6%. The results of service learning in cycle 1 increased from 8 students to 14 students with an increase of 27.2% from 36.4% to 63.6%. For cycle 1 there are still 8 students who have not finished so it is necessary to make improvements to this learning process. Repair activities using procedures in cycle I through planning, action and reflection (evaluation) In this brief, both regression- and classification-based models (supervised machine learning models) are investigated (Musa et al., 2021). The description of the students' final scores after the cognitive, affective and psychomotor scores were combined and divided by three. The learning outcomes of top service in cycle 2 obtained the following results:

Table 4. Service Learning Outcomes for Cycle 2

| No | Value | Frequency | Percentage (%) | Description |
|----|---------------|-----------|----------------|-------------|
| 1 | $\geq 73-100$ | 22 | 100 | Complete |
| 2 | < 73 | 0 | 0 | Unfinished |

Based on the data in table 4 regarding the learning outcomes of top service in cycle 2, it was found that all 22 students, all completed with a score of 73 and above in accordance with the minimum completeness criteria, resulting in an increase of 36.6% from 63.4% of participants. Students who pass, so that based on table 4 there is an increase in learning outcomes for underserving using D'Volleyball Learning Application.

Discussion

The results of this classroom action research can be seen based on the results of the initial

conditions or initial tests, then continued with the results of learning services on cycle 1 and then learning outcomes in cycle 2. The increase in learning outcomes in the initial conditions with a percentage of 36.4% of students who complete, it can be explained that students do not understand cognitively and have not achieved skills in top service, this is in accordance with research conducted (Syaleh, 2017) that for the results of initial conditions or doing pretest data obtained 35.29% of students are not appropriate with minimum completeness criteria, this is because there are several weaknesses in the previous learning, namely that many students still do not understand the basic techniques of volleyball, especially in the top serve. It was found that both self-talk strategies are effective on improving performance. However, instructional self-talk was found to be more effective than motivational self-talk on fine motor skills, while both motivational and instructional self-talk to be equally effective on motor skills requiring strength and endurance (Zetou et al., 2012). The sports skills training process is the basis of a multi-year sports training system, preferably training based on scientific organization, methodology, activities and activities based on sport knowledge, skills and specialization (Conference & Hosted, 2022). So it is necessary to make improvements in learning against the weaknesses of learning that is already running.

Furthermore, the increase in service learning outcomes from the initial condition of 36.4% to 63.6%, through the D'Volleyball Learning Application learning media, there was an increase of 27.2% in line with the results of this study (Jayanto et al., 2015) in the class action research he carried out also showed an increase in learning outcomes because he was given interesting audio-visual media for students. In this application there is a video that explains about top service and there is material about top service, so learning using audio visuals can make learning more interesting. Learning outcomes in cycle 2 with all 22 students all completed, according to the research conducted (Ramdani et al., 2022), in cycle 2, improvements were made to learning weaknesses in cycle 1 by providing reinforcement and motivation to students, so that in cycle 2 the results of upper service learning can increase and all students complete according to the minimum completeness criteria. (Mislan & Santoso, 2019) explained that learning media has an important role in, learning media is very influential on learning outcomes, where currently there have been many developments in all branches of sports with interactive media. In line with (Muslim, 2021) that at this time many learning media have been developed that utilize audio-visual technology in accordance with the characteristics of physical education learning that use a lot of motion activities. So that a good learning media can be a good intermediary in conveying messages or information that

educators want to convey to their students to achieve learning goals.

CONCLUSION

Based on the results of research and discussion, it can be concluded that using the D'Volleyball Learning Application learning media can improve student service learning outcomes for volleyball. So that this learning media can be used as one of the media that can be chosen by educators, especially volleyball material.

ACKNOWLEDGEMENT

The publication of this article was funded by DIPA of Public Service Agency of Universitas Sriwijaya 2022. SP DIPA-023.17.2.677515 /2022, On Desember 13, 2021. In accordance with the Rector's Detee 0005/UN9/SKLP2M/2022. On Juni 15. 2022. And to all parties who helped in this research activity.

REFERENCES

- Azizah, A. (2021). *PENTINGNYA PENELITIAN TINDAKAN KELAS BAGI GURU DALAM PEMBELAJARAN*. 14, 15–22.
- Bangun, S. Y. (2016). PERAN PENDIDIKAN JASMANI DAN OLAHRAGA PADA LEMBAGA PENDIDIKANDI INDONESIA. *Publikasi Pendidikan*, 6(3), 156–167. <https://doi.org/10.26858/publikan.v6i3.2270>
- Conference, I., & Hosted, E. (2022). *EDUCATION AND DEVELOPMENT OF PHYSICAL QUALITIES OF YOUNG*. 14–23.
- Destriani, D., Destriana, D., Switri, E., & Yusfi, H. (2019). The development of volleyball games learning for students. *Jurnal SPORTIF : Jurnal Penelitian Pembelajaran*, 5(1). https://doi.org/10.29407/js_unpgri.v5i1.12605
- Hartati, H., Destriana, D., Aryanti, S., & Destriani, D. (2018). *Macro Flash-based Multimediafor Improvement The Learning Result of Volleyball Game*. 262(Ictte), 233–236. <https://doi.org/10.2991/ictte-18.2018.41>
- Jayanto, C., Karjadi, M. S., & Permono, P. S. (2015). Unnes Journal of Sport Sciences. *Unnes Journal of Sport Sciences*, 4(1), 50–59. <http://journal.unnes.ac.id/sju/index.php/ujss>
- Lengkana, A. S., & Sofa, N. S. N. (2017). Kebijakan Pendidikan Jasmani dalam Pendidikan. *Jurnal Olahraga*, 3(1), 1–12. <https://doi.org/10.37742/jo.v3i1.67>
- LESILOLO, H. J. (2019). Penerapan Teori Belajar Sosial Albert Bandura Dalam Proses Belajar Mengajar Di Sekolah. *KENOSIS: Jurnal Kajian Teologi*, 4(2), 186–202. <https://doi.org/10.37196/kenosis.v4i2.67>
- Mislan, & Santoso, D. A. (2019). Peran Pengembangan Media Terhadap Keberhasilan Pembelajaran PJOK di Sekolah. *Prosiding Seminar Nasional IPTEK Olahraga*, 12–16. <https://ejournal.unibabwi.ac.id/index.php/semnassenalog/article/view/585>

- Musa, R. M., Majeed, A. P. P. A., Suhaimi, M. Z., Razman, M. A. M., Abdullah, M. R., & Osman, N. A. A. (2021). *Machine Learning in Elite Volleyball: Integrating Performance Analysis, Competition and Training Strategies*.
- Muslim, A. (2021). Penggunaan Media Pembelajaran Terhadap Keberhasilan Mapel PJOK pada Kelas IV SD Negeri 01 Banjarsari. *Jurnal Kualita Pendidikan*, 2(3), 2774–2156.
- Nafrin, I. A., & Hudaidah, H. (2021). Perkembangan Pendidikan Indonesia di Masa Pandemi Covid-19. *Edukatif: Jurnal Ilmu Pendidikan*, 3(2), 456–462. <https://doi.org/10.31004/edukatif.v3i2.324>
- Pane, A., & Darwis Dasopang, M. (2017). Belajar Dan Pembelajaran. *FITRAH: Jurnal Kajian Ilmu-Ilmu Keislaman*, 3(2), 333. <https://doi.org/10.24952/fitrah.v3i2.945>
- Purnomo, D. H., Sir, I., & Amir, A. (2022). Using a Hanging Ball For Primary School Students on Volleyball Down Passing. *ETDC: Indonesian Journal of Research and Educational Review*, 1(3), 363–370.
- Ramdani, A., Destriani, & Bayu, W. I. (2022). Efektivitas Penggunaan D'volleyball Learning Application Dalam Pembelajaran Pendidikan Jasmani. *Jendela Olahraga*, 7(2), 183–192.
- Sriwijaya, U., & Tangerang, U. M. (2022). 1,2,3,4 ,. 5(I), 217–226.
- Syaleh, M. (2017). Upaya Meningkatkan Hasil Belajar Servis Atas Bola Voli Melalui Media Pembelajaran Lempar Pukul Bola Kertas Pada Siswa Kelas Vii Smp. *Jurnal Prestasi*, 1(1), 23–30. <https://doi.org/10.24114/jp.v1i1.6494>
- Tryanasari, D., Aprilia, S., & Cahya, W. A. (2017). Pembelajaran Literasi di SDN Rejosari 1 Kecamatan Kawedanan Kabupaten Magetan. *Premiere Educandum : Jurnal Pendidikan Dasar Dan Pembelajaran*, 7(02), 173. <https://doi.org/10.25273/pe.v7i2.1641>
- Utami, I., Burhanuddin, S., & Sahabuddin. (2022). Implementation of a Scientific Approach Using Problem Based Learning (PBL) Models to Improve Learning Outcomes of Overhand Pass In Volleyball Game. *COMPETITOR: Jurnal Pendidikan Kepelatihan Olahraga*, 14(1), 115–134. <https://ojs.unm.ac.id/competitor/article/view/32521/CJPKO.V14N1.115-134.pdf>
- Zetou, E., Vernadakis, N., Bebetos, E., & Makraki, E. (2012). The effect of self-talk in learning the volleyball service skill and self-efficacy improvement. *Journal of Human Sport and Exercise*, 7(4), 794–805. <https://doi.org/10.4100/jhse.2012.74.07>