Abstract
This research aims to determine the improvement in learning outcomes through the D, Volleyball Learning web in volleyball learning at SMA Negeri 1 Tanjung Batu. This research uses classroom action research (PTK) using two action cycles. The research instruments are cognitive (knowledge), psychomotor (skills) bottom serve, smash, affective (attitude) tests. This data collection technique uses bottom service tests, smash, observation and documentation. The test data analysis technique uses learning completeness. The subjects used in this research were 31 students in class VIII.2, 11 male students and 20 female students. Based on the results and discussion of the research, it was found that in the first cycle of assessing students' knowledge, the percentage of completeness reached 32.2% with an average score of 58.6. Assessing students' lower service skills, the percentage of completion reached 32.2% with an average of 45.4. Assessing students' smash skills, the percentage of completion reached 41.9% with an average of 64.4. The assessment of students' attitudes, the percentage of completeness reached 61.2% with an average of 70.9. Then in cycle II, the results of assessing students' knowledge, the percentage of completeness reached 83.8% with an average score of 79.3. The assessment of students' lower service skills, the percentage of completion reached 83.8% with an average score of 75. The assessment of students' smash skills, the percentage of completion reached 87.1% with an average of 74.7. Assessment of students' attitudes, the percentage of completeness reached 80.7% with an average of 77. From the results of observations, students' activeness increased, in cycle I the percentage of students' activeness reached 65.1% in the active category and in cycle II it increased by percentage 80% are very active, so it can be concluded that the implementation of the D, Volleyball Learning web media is effectively used in learning volleyball at SMP Negeri 1 Tanjung Batu.

How to Cite
INTRODUCTION

Education is one of the efforts aimed at developing the quality of human resources which is usually the task of every country. Education is a long-term strategic program whose implementation must be able to answer national needs and challenges (Fujiawaiti, 2016). Education is a conscious and planned effort to create a learning atmosphere and shape the learning process so that students actively develop their potential to obtain religious spiritual strength, self-discipline, personality, intelligence, understanding of education, educational knowledge, elements of noble moral education, as well as the skills needed by themselves and other people (Arfani, 2016).

Physical education is something that is done consciously through activities aimed at improving physical fitness and developing motor skills and knowledge (Irmaningsyah et al., 2020). Physical education is conditioning learning by prioritizing physical activity or movement during the literacy process (Sabillah & Nasrulloh, 2022). Education is a process of activities carried out by each person to develop spiritual attitudes, which includes mental, intellectual and even spiritual aspects. Physical education is a teaching that uses tools to achieve or educational processes that coordinate body functions such as organs, neuromuscular, intellectual, social, cultural, emotional and ethical (Iyakrus, 2019). Physical education is a complex thing, so it will make the components of every human’s abilities normal (Destriana et al., 2022).

Health physical education is an educational method related to physical fitness and health, improving people’s fitness conditions in terms of ability, motor skills, critical thinking, social skills, logical thinking, emotional stability, moral attitudes, concern for a healthy lifestyle and understanding of the environment. clean with aspects of physical activity (Sudibyo & Nugroho, 2020). (Samsudin, 2021) physical education and sports are carried out at every level for movement skills which result in the development of intellectual attitude skills in everyday life days to achieve health and physical fitness.

With the growth and development of human needs. This also changes the development of the education system in Indonesia and in the world. Educational institutions cannot be separated from the data management system, because the system consists of sub-subs related to data management related to problems that help organizations in making decisions. Online data management systems make it easier for users to access data compared to offline systems, so data management systems are really needed in the education system. Several opinions above can be concluded that physical education is an educational process that involves physical activity by applying skills, attitudes and knowledge in accordance with educational goals.

(Gesbert et al., 2018) Volleyball is a complex game that is not easy for everyone to play. (Destriani et al., 2019) volleyball is a sport played by 2 opposing teams to determine the winner. (de Leeuw et al., 2022) Volleyball is a sport played by 2 teams, each team consisting of 6 players on one court separated by a net. From the definition above, it can be concluded that volleyball is a sport played by 2 teams, each team consisting of 6 players on one field to determine the winner.

Technological developments can be used as a source of learning in the form of web-based applications including educational games and social media. Learning media is anything that is used to convey messages and can stimulate students’ thinking, emotions, attention and readiness so as to encourage deliberate, focused, centered and controlled learning (Nurrita, 2018). Learning media is part of learning resources, a combination of software (learning materials) and hard learning devices (learning tools). Learning media is a factor that is closely related to learning system methods and strategies (Tarigan & Siagian, 2015).

Learning is an activity process with the main target or objective presented in the formulation of competencies or behaviors that students want to achieve after completing learning. We see whether the objectives are achieved or not in learning and the quality of the teaching and learning activities carried out, then it must be done to assess and evaluate the results of students’ learning abilities (Mustafa & Masgumelar, 2022).

Web is software that functions to display documents on the web which allows users to access the internet through software connected to the internet (Faqih, 2021). The web is all web pages in a domain that contain information (Januarisman & Ghufron, 2016). The web is a collection of pages used for data, text, still or moving images, animation, sound or a combination of both, both static and dynamic, which form a series of interconnected links in each hyperlink website network (Ndaru Kukuh Masgumelar & Pinton Setya Mustafa, 2021).

(Hastie et al., 2019) An education system
is a strategy or method used in the teaching and learning process to achieve a goal. Where technology today is developing very quickly.

According to the term media, it is a program used to carry out a role that uses media services, existing media for the goals to be achieved. According to the Big Indonesian Dictionary, media is a system designed to manage data using certain special rules or regulations. If designed and selected correctly, media can help lecturers and students carry out active two-way communication. Without media, lecturers might tend to speak one way to students. However, by using media, lecturers can organize their classes so that not only they themselves are active, but also the students.

This digital era not only affects industry but all aspects of human life, including the world of education. (Gesbert et al., 2018) media is a program used to carry out roles that use media services, existing media for the goals to be achieved. (Destriani, 2018) The D’Volleyball Learning website can be used via mobile phone, this website can contain material understanding the basics of volleyball, learning videos, assessment tests, measuring volleyball playing skills. Technology-based media can make it easier for teachers to achieve learning goals, save costs, energy and time and also this technology media can be used anytime and anywhere.

Volleyball is a sport game played with 2 opposing teams to determine the winner (Daulay & Daulay, 2018). From the definition above, it can be concluded that volleyball is a sport played by 2 teams, each team consisting of 6 players on one field to determine the winner.

**METHOD**

This research uses PTK (Classroom Action Research) in collaboration with PJOK teachers. Collaborative PTK with PJOK teachers is an inspection activity using certain rules to obtain useful information (Destriani et al., 2020). And the aim is to improve the quality of learning practices (Nurgiansah et al., 2021). PTK collaboration with PJOK teachers can be used to increase teacher self-reflection, improve school progress, and promote professional culture among educators (Nurkholis, 2013).

This classroom action research is a form of reflective research carried out by researchers to improve and increase the quality of learning through certain behaviors. PTK must be based on the belief that efforts to improve or increase the quality of learning must be carried out by a teacher (Wardani et al., 2019). Several opinions can be concluded that classroom action research carried out by teachers can solve classroom problems in classroom situations.

**RESULTS AND DISCUSSION**

**Cycle I**

This class action research was carried out in the odd semester of July in the 2023/2024 academic year in class VIII.2 of SMP Negeri 1 Tanjung Batu. The research subjects were 31 students consisting of 11 men and 20 women. This research uses the D’Volleyball Learning web media which consists of several cycles. Cycle I and cycle II. Before starting the research, the researcher communicated with Mr. Jamalul Insan, S.Pd. as a PJOK teacher at SMP Negeri 1 Tanjung Batu to conduct cycle I research, after discussing with the PJOK teacher.

**Table 1. Frequency of Knowledge Results of Cycle I Students**

<table>
<thead>
<tr>
<th>Pre Tes Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete</td>
<td>9</td>
</tr>
<tr>
<td>Incomplete</td>
<td>22</td>
</tr>
<tr>
<td>Total</td>
<td>31</td>
</tr>
</tbody>
</table>

Based on the students’ first cycle learning results, we can see that the first cycle results for class VIII.2 students reached a maximum of 85% and a minimum of 35%. The average value is 58.6%. 9 students with a completion percentage of 29.1% and 22 students with an incomplete percentage of 70.9%. The learning outcomes of students in cycle I were not successful because they did not reach the specified success indicators, namely 80% and the standard of completion (KKM) 75, therefore improvements must be made in cycle II to achieve achievement indicators of 80% or more.

**Table 2. Frequency of Smash Results for Pre-Cycle Students**

<table>
<thead>
<tr>
<th>Pre Tes Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete</td>
<td>9</td>
</tr>
<tr>
<td>Incomplete</td>
<td>22</td>
</tr>
<tr>
<td>Total</td>
<td>31</td>
</tr>
</tbody>
</table>

Based on the result of smash students in the pre-cycle, it can be seen that the score results for class VIII.2 students in the pre-cycle obtained the highest chord of 13 and the lowest score of 6. The average score was 58.4. There were 9 students
who completed with a percentage of 29.1% and those who did not complete with a percentage of 70.9%. Then the test resultssmash students in the pre-cycle are not said to be successful, because they have not exceeded the predetermined success indicators, namely 80% with the completion criteria (KKM) 75.

**Cycle II**

This class action research was carried out in the odd semester 11 July - 1 August 2023 which was carried out in class VIII.2 of SMP Negeri 1 Tanjung Batu. The research subjects were 31 students consisting of 11 men and 20 women. This research uses mediaweb D’Volleyball Learning which consists of several cycles. Cycle I and cycle II. Before starting the research, the researcher communicated with Mr. Jamalul Insan, S.Pd. as a PJOK teacher at SMP Negeri 1 Tanjung Batu to conduct cycle II research, after discussing with the PJOK teacher.

**Tabel 3. Frequency of Learning Outcomes for Cycle II Students**

<table>
<thead>
<tr>
<th>Post Tes</th>
<th>Frekuensi</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete</td>
<td>26</td>
<td>83,8</td>
</tr>
<tr>
<td>Incomplete</td>
<td>5</td>
<td>16,2</td>
</tr>
<tr>
<td>Total</td>
<td>31</td>
<td>100</td>
</tr>
</tbody>
</table>

Based on the learning results of the second cycle of students, it can be seen from the learning results of class VIII.2 students in the second cycle that they got the highest score of 95 and the lowest score of 65. The average score was 79.3%. There were 26 students who completed and 5 students who did not complete. The percentage of completeness of student learning outcomes has reached 83.8% with a very high success category and has reached the researcher’s success indicators.

**Tabel 4. Frequency of Smash Results for Cycle II Students**

<table>
<thead>
<tr>
<th>Post Tes</th>
<th>Frekuensi</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete</td>
<td>27</td>
<td>87,1</td>
</tr>
<tr>
<td>Incomplete</td>
<td>4</td>
<td>12,9</td>
</tr>
<tr>
<td>Total</td>
<td>31</td>
<td>100</td>
</tr>
</tbody>
</table>

Based on the students’ smash results in cycle II, it can be seen that the scores of class VIII.2 students in cycle II obtained the highest chord 15 and the lowest score 7. The average value is 74.7. There were 27 students who finished with percentage87.1% and 4 incomplete percentage12.9%. Then the test resultssmash Students in cycle II have been said to be successful, because they have exceeded the predetermined success indicators, namely 80% with a completion criterion (KKM) 75.

**CONCLUSION**

Based on the analysis in cycle I of student activity, student learning outcomes and results of smash skills, the next cycle must be implemented in cycle II, because many students did not reach the KKM, improvements need to be made in cycle II.

Where it provides learning motivation for students to ask and answer questions given by the teacher, so that students can pay attention to what the teacher says, so the teacher appoints one of the students to convey the material that has been studied and the teacher gives verbal reminders to students so that students can quickly Remember the material that has been discussed

In the second cycle of learning, student learning outcomes with a knowledge assessment obtained a result of 83.8%, an assessment of lower service skills obtained a result of 83.8%, an assessment of smash skills obtained a result of 87.1% and an attitude assessment obtained a result of 80.7%.

From the analysis of student learning outcomes in cycle II, there was an increase in student learning outcomes who had reached the learning indicators. This really provides benefits and influence on volleyball learning mediaweb D’Volleyball Learning to students. Useweb able to have an effect on volleyball learning to be applied to PJOK learning (Priando Purba et al., 2021).

Based on the learning results in cycle I and cycle II, it provides evidence that media is used web D,Volleyball Learning very effective to use in the learning process.

**REFERENCES**


Nurkholis. (2013). Education In An Effort ToAdvance Technology. 1(1), 24–44.


