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Analysis of game-based learning to increase student engagement in physical education, sports and health classes

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Abstract

The purpose of Physical Education, Sports, and Health (PJOK), an important component of the school curriculum, is to improve students' mental, physical, and motor skills. Student academic achievement and engagement can be affected by monotonous learning. One strategy that has attracted attention is game-based learning. The purpose of this study was to examine how game-based learning can increase students' interest in PJOK subjects. The research method used was qualitative research. Data collection techniques through interviews with PJOK subject teachers, student group discussions, and observations. Finding trends in student engagement, how students respond to game-based learning, and how this affects their interest in PJOK learning is part of the data analysis process. According to preliminary findings, game-based learning increases student attention and engagement. With this approach, students will be more engaged and excited to learn. Students explained that games add interest to the learning process. Teachers also observed that students participated more and interacted more with their friends during the learning process. Students' interest and engagement in PJOK subjects can be significantly improved through game-based learning. The conclusion is that to enhance students' educational experiences and meet more general PJOK goals, it is important to incorporate these strategies into classroom learning.

Keywords: Motor Skills, Student Participation, Physical Education, Learning through Games .



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INTRODUCTION

An important component of the curriculum that seeks to improve students' physical health, motor skills, and mental health is Physical Education, Sports, and Health (PJOK). Student achievement and engagement can be negatively affected by monotonous instruction. An increasingly popular method is game-based learning. The purpose of this study was to examine how game-based learning can improve students' interest in PJOK learning. Qualitative research was the methodology used. The instruments in this study were PJOK teacher interviews, student group discussions, and observations used to collect data. Finding trends in student engagement, their responses to game-based learning, and its impact on their interest in PJOK learning were the methods used to analyze the data. Initial results indicate that game-based learning has a positive impact on students' motivation and self-control.

When using this method, students will be more engaged and active in their learning. Students explained that games made learning more interesting. In addition, PJOK teachers noted that there was an increase in student participation and interaction with the subject during the learning process. Game-based learning may be important in increasing student interest and enthusiasm in PJOK classes. The implication is the importance of integrating this concept into teaching practices in schools to improve student learning and achieve more ambitious PJOK goals, ethical actions, and other aspects of learning. All of this is done nationally through sports, physical activity, and health which are methodically determined to meet educational goals (Aji, 2016). The main objective of PJOK learning in schools is to

raise awareness of the importance of physical activity to support the growth and development of the body and maintain an active lifestyle throughout life. This learning also aims to develop self-management skills in maintaining physical fitness, maintaining health and well-being with a healthy and correct lifestyle, and improving basic motor skills, motor skills, concepts/knowledge, principles, strategies, tactics in games and sports. Through physical education can increase self-confidence, sportsmanship, honesty, discipline, responsibility, cooperation, autonomy, leadership, and democratic attitudes in physical activity, PJOK also seeks to provide a solid ethical foundation.

This initiative also seeks to improve the learning environment, foster intelligence in Indonesian society, and offer an environment that encourages self-expression. Students are expected to gain an understanding of physical health and general health as a result of the PJOK course (Nopiyanto et al., 2019). Students' physical needs include the ability to follow all learning procedures both in academic and extracurricular areas (Bangun, 2016)

The reality shows that student engagement and enthusiasm in PJOK courses often do not reach the ideal level. Low student interest and engagement are often caused by a number of factors, including lack of diversity in teaching strategies, boring materials, and lack of active student participation. It should be noted that PJOK is taught from elementary school (SD) to junior high school (SMA). Because the subjects in school are basically the same, teachers must be creative in implementing teaching strategies. To create a learning environment, teachers are very important(Di et al., 2024). Different teaching strategies can trigger students' curiosity and keep them away from boredom. Many students find learning PJOK fun because it allows them to learn outside the classroom, which helps them not always concentrate on the content. A more structured strategy that triggers students' attention is needed to increase their focus and engagement in PJOK education. To improve students' physical condition, PJOK learning is needed. Therefore, teachers must choose the best PJOK teaching strategy. Presenting diverse and non-monotonous learning resources is one way to overcome this problem. For example, game-based learning can be used to provide variation in PJOK learning (Samodra, 2020).

One of the tools to increase student engagement in PJOK learning from start to finish is the learning model (Nurulita et al., 2023). One strategy that has proven successful in increasing student interest and engagement is game-based learning. This method creates a fun and engaging learning environment by incorporating game aspects into the educational process. Games not only increase the enjoyment of physical activity but also help children acquire motor skills and basic PJOK ideas more organically and in a fun way. One strategy to create a fun learning environment that increases student engagement in the process is game-based learning.

Another cutting-edge learning strategy that can be used in every PJOK learning process is the use of games (Gustiawati et al., 2014). In addition to building physical strength, game-based learning is known to be an effective way to improve gross motor development by teaching cooperation, rules, and problem-solving skills. The use of games in the classroom helps to attract students' interest and encourage them to participate more actively in PJOK learning. Students' curiosity will be piqued by game-based learning because it can arouse positive emotions. There is no doubt that this new strategy will end student boredom (Nurdiyan, 2018). Our goal is for young children to participate in PJOK programs with more enthusiasm and motivation. One specific example is the growth of running movement learning through reinforcement games, which can make the teaching and learning process more interesting and enjoyable. A learning environment that promotes student participation and teamwork and offers a satisfying educational experience can be built through game-based learning. There is currently little research conducted in Indonesia on the implementation and efficacy of game-based learning in the context of PJOK.

Thus, further investigation is needed to examine its potential in increasing student engagement. The purpose of this study was to determine what factors encourage and inhibit the use of game-based learning, as well as to examine how well this learning increases student engagement. It is hoped that the findings of this study will help in creating more interesting and successful PJOK learning techniques, which will ultimately improve the standard of physical education in elementary schools.

METHODS

To better understand how teachers and students experience using game-based learning, this study uses a qualitative methodology. The case study research approach allows researchers to examine the specific context of game use, education based on physical education. Students and instructors who take physical education at SMP Negeri 1 Sinjai Barat became the study population. Purposive sampling was used in the sampling process, which involved selecting 30 students and teachers with previous experience in using game-based learning strategies. Data collection techniques include interviews and observations. The purpose of observation is to see firsthand how game-based learning is applied in a practical setting. Teachers will be interviewed to gain insight into the planning, implementation, and reflection processes surrounding the use of game-based learning. Students' opinions about their educational experiences were also collected through interviews. The results and discussion section follows the analysis and presentation of the collected data. Students admitted that learning PJOK through games made them happier and more enthusiastic. Students stated that lessons were taught using game techniques.

RESULT AND DISCUSSION

Based on the results of the study, game-based learning techniques were used, students moved, interacted, and took part in routine activities, which greatly increased the number of students who actively participated. The PJOK learning that was implemented piqued the interest of students at SMP Negeri 1 Sinjai Barat. Students admitted that using games to learn PJOK made them feel better and more enthusiastic. Because playing games while learning PJOK increases fun and reduces boredom. By reducing monotony, game-based learning makes learning more interesting for students (Veronica, 2018). Games also help players improve their communication, cooperation, and sportsmanship. Different games, such as rounders, require students to work together and communicate well to win. According to (Hasanah, 2016) showed that the five game models they used significantly increased student engagement and that the games allowed students to learn effectively, efficiently, and enjoyably. The results of this study indicate that game-based learning is very important to increase the interest of students at SMP Negeri 1 Sinjai Barat in PJOK learning. In addition to making learning more interesting and engaging, this approach helps students improve their social skills. However, assistance in the form of teacher training and school infrastructure improvements are needed for the implementation of this strategy to be successful. Therefore, at SMP Negeri 1 Sinjai Barat, game-based learning can be a useful tactic to improve physical education standards.

Indonesia has many traditional games that are rich in culture and heritage. Teachers can use existing traditional games as teaching methods in PJOK. Games that can be played while learning PJOK are:

- **Blindfold Ball**
Objective: To train communication and teamwork.
How to Play: Students are divided into two teams, and one member of each team is given a blindfold. The other team member gives directions to pick up or move the ball
- **Variation of Kasti Game**
Objective: To train eye-hand coordination, and teamwork.
How to Play: Kasti is played with modified rules, such as adding targets to throw or creating more safe zones.
- **Spider Web**
Objective: To train balance and coordination.
How to Play: Use a rope to make a large "net". Students must pass through the net without touching it, practicing strategy and flexibility.
- **Tug of War:**
Objective: A game in which two teams face each other and try to pull a rope towards each other. Tug of war helps improve physical strength, coordination skills and teamwork.
- **Three-Color Ball**
- **Objective:** Train concentration, teamwork and decision-making.

- How to Play: Use three balls of different colors, and each ball has a different rule (for example, the red ball can only be thrown, the green ball must be dribbled, etc.).

In addition to existing traditional games, teachers can also create their own games that are in accordance with the learning topic, teachers can take advantage of today's sophisticated technology, and teachers can also modify existing games according to conditions and needs.

The implementation of learning through games in its implementation has several inhibiting and supporting factors. The supporting factors are as follows:

- Adequate infrastructure: The availability of adequate facilities and equipment greatly facilitates the implementation of game-based learning methods. Good infrastructure allows various types of games to be implemented according to learning objectives.
- Supportive learning environment: Trained teachers and good learning support are very important. Professional training and support from school administrators can ensure that these games are well designed and implemented.
- Active Student Involvement: Student involvement in this learning affects the success of learning through games.
- While the inhibiting factors in the implementation of game activities in PJOK lessons are as follows: Inadequate Facilities and Equipment
- Lack of balls, narrow fields, or inadequate facility conditions can hinder the implementation of the game.
- Lack of Teacher Mastery
Teachers who do not master game-based teaching methods or certain sports techniques can affect the effectiveness of learning.
- Physical Condition of Students
- Students with health problems, such as asthma or injuries, are often unable to fully participate in physical activities.
- External Distractions
Noise from the surrounding environment or shared use of the field with other classes can disrupt student concentration and learning.
- Unsupportive Norms and Habits
In some places, certain sports are less accepted due to cultural or traditional reasons, so students are not enthusiastic about participating.

Strategies to Overcome Barriers

- Game Adaptation: Modify games to be more inclusive and appropriate to students' abilities.
- Facility Provision: Seek adequate support for facilities, either through the school budget or through collaboration with external parties.
- Time Management: Design activities that are efficient with the available time.
- Motivational Approach: Use interesting methods, such as music or healthy competitive elements, to motivate students.
- Safety and Mentoring: Ensure that all students understand safety rules and provide special attention to students who need it.

Because teachers provide materials with fun and interesting methods to attract children's interest in participating, game-based learning in PJOK subjects helps increase student engagement. To help students overcome their boredom with repetitive PJOK learning materials and activities, game activities are used to give them new experiences in learning activities through games that are carried out very efficiently. Game-based learning not only helps children overcome their boredom but also improves teamwork, especially in group activities. Educators are expected to offer a variety of instructional games. Teachers can adapt traditional games to suit current demands and circumstances in addition to existing ones. To provide teachers with many resources, you can also create instructional games in PJOK classes.

CONCLUSION

Physical education, sports, and health (PJOK) is an interesting and popular subject for students of SMP Negeri 1 Sinjai Barat. Because PJOK is generally the same and the methods used are repetitive, it is difficult to adopt PJOK subjects when students are not interested in learning activities. This problem must be solved by educators. Teachers can utilize traditional Indonesian games and current sophisticated technology. Instructors can look for game references. Game-based learning in PJOK subjects can increase student involvement in PJOK activities, because through game-based activities students feel happy and do not feel bored. The implementation of game-based learning activities is influenced by a number of factors, both supporting and inhibiting.

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