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The Effect of Implementing the Sport Education Model (SEM) on Students' Motivation in Physical Education (PE) Learning Basketball at State Vocational High School 1 of South Indralaya

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Abstract

Learning motivation is an important factor in the success of Physical Education, Sports, and Health learning, especially in basketball. Learning that is still dominated by conventional methods tends to result in low student participation and motivation. This study aims to determine the effect of the application of the Sport Education Model (SEM) on student learning motivation in PE learning on basketball at State Vocational High School 1 South Indralaya. This study uses a quantitative approach with an experimental method. The research subjects consisted of an experimental class given SEM learning treatment and a control class using conventional learning. The research instrument was a student learning motivation questionnaire. Data analysis was conducted using paired samples t-test and independent samples t-test. The results showed that there was a significant increase in student learning motivation in the experimental class after the implementation of SEM, and there was a significant difference in learning motivation between the experimental and control classes. For data analysis using the t-test dan ANCOVA, showing the results that there was a significant difference with a value of $\alpha = 0,05$, so that the application of SEM had a real effect on student learning motivation after controlling for covariate variabels. These findings indicate that SEM is more effective than conventional learning in increasing self-motivation ini PE Learning, especially in basketball material. Thus, the Sport Education Model has a positive effect on student learning motivation in PE learning on basketball. The application of SEM is recommended as an alternative learning model to increase student engagement and motivation.

How to Cite

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INTRODUCTION

Pendidikan Physical Education, Sports, and Health is an integral part of the education system that plays a vital role in developing students' potential holistically, encompassing physical, cognitive, affective, and social aspects. Through PE learning, students are not only guided to master motor skills but also equipped with character values such as cooperation, sportsmanship, responsibility, and discipline. One PE material that has great potential in developing these aspects is basketball, because it requires technical skills, an understanding of strategy, and intensive social interaction within a team. The success of PE learning, particularly in basketball, is greatly influenced by students' level of learning motivation. Motivation functions as an internal and external driver that determines students' interest, involvement, and persistence in participating in the learning process (Hamdani & Semarang, 2023)(Hamzah, 2020)(Uno, 2019). In the context of sports learning, motivation not only influences student activity but also affects skill mastery, game understanding, and a positive attitude towards physical activity. Self-Determination Theory explains that intrinsic and extrinsic motivation play a crucial role in encouraging individual engagement in learning activities (Hamzah, 2020). Therefore, Physical Education learning needs to be designed to foster both types of motivation in a balanced manner. However, initial observations at State Vocational High School 1 South Indralaya indicate that student motivation in basketball learning remains relatively low. This is evidenced by low student participation during learning, with only around 30–50% of students actively engaging in practical activities. The learning process is still dominated by conventional, teacher-centered methods, such as repetitive and lacks variety in technical drills, resulting in monotonous and uninteresting learning. The lack of innovation in learning models results in low student engagement and suboptimal development of social aspects and teamwork.(Kusumawati, 2024)

One learning model deemed capable of addressing these issues is the Sport Education Model (SEM). This model was developed to provide a more authentic sports learning experience by mimicking the structure and dynamics of real sports, such as season-based learning, consistent teamwork, formal competitions, score recording, and student role assignments (Gutiérrez et al., 2020). Through SEM, students not only play the role of players but also serve as coaches, referees, and team managers, fostering active involvement, a sense of responsibility, and increased motivation to learn.(Hoyo-Guillot et al., 2025)

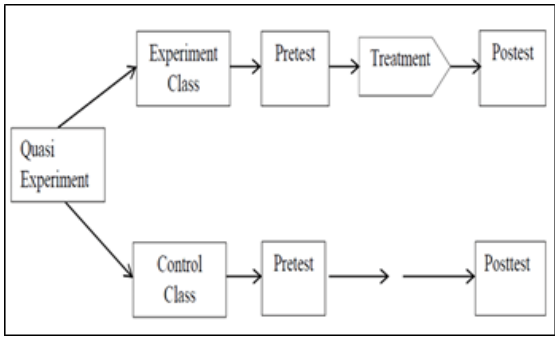
Several previous studies have shown that implementing the Sport Education Model has a positive impact on student motivation and engagement in physical education learning. Tendinha et al. reported that SEM can increase students' intrinsic motivation through meaningful and participatory learning experiences (R. Tendinha et al., 2021). Research by Widiyatmoko in 2025 also demonstrated that SEM is effective in increasing student participation, teamwork, and sportsmanship (A. Widiyatmoko et al., 2025). Similar findings were presented by Schiff and Supriady in 2023, who stated that SEM-based learning is more capable of creating a fun and meaningful learning environment than conventional learning (S. Schiff & Supriady, 2023). Therefore this study offers a novel contribution by implementing the Sport Education Model (SEM) in physical education (PE) learning, specifically in basketball instruction at t at State Vocational High School level, by examining its impact on student motivation at at State Vocational High School 1 South Indralaya. Although the effectiveness of SEM has been widely demonstrated, studies on its application in basketball instruction at State Vocational High School level, particularly at State Vocational High School 1 South Indralaya, are still relatively limited. This is despite the fact that the characteristics of State Vocational High students, which emphasize practical skills and collaboration, are highly relevant to the SEM approach. Therefore, this study is deemed important to examine the effect of implementing the Sport Education Model on student learning motivation in learning Physical Education (PE) basketball. (Bessa et al., 2021).

Based on this description, the research question in this study is whether the implementation of the Sport Education Model influences student learning motivation in learning Physical Education (PE) basketball at State Vocational High School 1 South Indralaya. This study aims to determine the effect of the Sport Education Model on student learning motivation. The hypothesis proposed in this study is that there is an influence of the application of the Sport Education Model on students' learning motivation in learning Physical Education (PE) basketball material.

METHODS

This study used a quantitative approach with an experimental method, which aimed to

determine the effect of the application of the Sport Education Model on student learning motivation in Physical Education, Sports, and Health basketball. The quantitative approach was chosen because this study emphasized objective variable measurement and statistical analysis to test the research hypothesis (Chu et al., 2022). The study was conducted at State Vocational High School 1 South Indralaya in the even semester of the current academic year. The research design used was a pretest–posttest control group design. In this design, research subjects were divided into two groups: an experimental group and a control group. The experimental group was given treatment in the form of learning using the Sport Education Model, while the control group participated in PE learning using a conventional learning model. Before and after the treatment, both groups were given an initial test (pretest) and a final test (posttest) to measure the level of student learning motivation.(Zhang et al., 2024)



Picture 1. Pretest-posttest control group research design. Source : research data

The research instrument used was a student learning motivation questionnaire compiled based on learning motivation indicators in Physical Education (PE) learning. The questionnaire was compiled in the form of a Likert scale and had undergone validity and reliability tests before being used in the study. This instrument was used to obtain quantitative data regarding the level of student learning motivation before and after treatment. The subjects of this study were grade XI students at State Vocational High School 1 South Indralaya. The sample determination was carried out using a cluster sampling technique, resulting in one class as the experimental group and one class as the control group. The object of this study was student learning motivation in Physical Education (PE) learning on basketball material. The research subjects consisted of two classes, namely grade XI TITL 4 as the control group and grade XI TKL 1 as the experimental group, with a total of 60 students as presented in **Tabel 1.**

Tabel 1. The research subject were class XI students at State Vocational High School 1 South Indralaya

Class	Number Of Students	Gender	Age Range	Desciption
XI TITL 4	30 students	26 Male, 04 Female	14-16 Years old	Control Gorup (Conventional Learning)
XI TKL 1	30 Students	25 Male, 05 Female	14-16 Years old	Experimental Group (Sport Education Model/SEM)
Total	60	51 Male, 09 Female		

Source : research data

The type of data used in this study was quantitative, in the form of student learning motivation scores. Data were obtained by completing a learning motivation questionnaire during the pretest and posttest in both groups. The data collection process involved administering a pretest, implementing learning according to the treatment for each group, and administering a post-test after the treatment was completed. Learning in the experimental group was implemented using the Sport Education Model over several meetings. In this learning, students were divided into fixed teams and assumed various roles, such as players, coaches, referees, and scorekeepers. Learning took place in a competitive season format, including training phases, matches, and reflection. Meanwhile, the control group followed learning using conventional methods, emphasizing technical practice and direct instruction from the teacher.

Data were analyzed using inferential statistics to determine differences in student learning motivation. Data were analyzed using difference tests to examine changes in learning motivation before and after the treatment and differences in learning motivation between the experimental and control groups. All analyses were conducted at a significance level of 0.05.

RESULTS AND DISCUSSION

This research was conducted in the even semester of the current academic year at State Vocational High School 1 South Indralaya. The study took place over several sessions of physical education (PE) on basketball, including a pretest, implementation of the learning model, and a posttest. Sixty eleventh-grade students participated in the study, divided into an experimental and a control group. This section presents the results of the study on student learning motivation after implementing the Sport Education Model, followed by a discussion linking the research find-

ings to the problem formulation, relevant theories, and previous research findings.

Data analysis showed that student learning motivation in the experimental group increased significantly compared to the control group. Data obtained from the pretest and posttest results indicate that before the treatment, student learning motivation levels in the two groups were relatively similar. However, after implementing the Sport Education Model, there was a significant increase in student learning motivation scores in the experimental group. A comparison of the average student learning motivation scores before and after the treatment is presented in Table 2.

Tabel 2. Comparison of students' average learning motivation scores

Group	Pretest average	Posttest average	Imporvement
Eksperimen (SEM)	70,42	85,63	15,21
Kontrol (Konvensional)	69,87	76,45	6,58

Tabel 2 shows that the average increase in student learning motivation scores in the experimental group was higher than in the control group. This indicates that the implementation of the Sport Education Model had a positive impact on student learning motivation in the Physical Education (PE) basketball lesson. Statistical testing results indicated a significant difference between the two groups, thus answering the research question.

These findings can be explained by the main characteristics of the Sport Education Model, which emphasizes active student involvement in the learning process. In SEM-based learning, students not only play the role of players but also take on various other roles such as coaches, referees, and scorekeepers. This division of roles creates a more meaningful learning experience, increases a sense of responsibility, and encourages emotional engagement during the learning process. This is in line with learning motivation theory, which states that motivation increases when students are actively involved and experience a pleasant learning experience (Uno, 2019).

These results also align with a 2021 study by Tendinha et al., which found that the Sport Education Model can create a collaborative learning environment and increase student motivation to actively participate (T. Tendinha et al., 2021). Siedentop, the initiator of the Sport Education Model, emphasized that learning that mimics real-life sporting situations can foster a sense of ownership and responsibility in students' activities. Research by Widiyatmoko et al. in 2025 also showed that the implementation of SEM contributed to increased student motivation and engagement through contextual and competitive learning (E. Widiyatmoko et al., 2025)(A. Widiyatmoko et al., 2025). In the context of basketball learning, activities such as team building, competition, and reflection on learning outcomes encourage social interaction and collaboration among students. Schiff and Supriady, in 2023, stated that active participation-based learning such as SEM helps students develop self-confidence, discipline, and responsibility (N. T. Schiff & Supriady, 2023). When students experience success with their team, their intrinsic motivation to learn is further enhanced.

However, several studies also indicate that implementing the Sport Education Model requires teachers to be prepared to manage time and student roles effectively. If lesson planning is inadequate, students' focus on learning objectives can be reduced. Therefore, the success of SEM implementation is greatly influenced by the teacher's role in systematically designing, managing, and evaluating the learning process. Overall, the results of this study indicate that the Sport Education Model is an effective learning model in increasing student motivation in Physical Education PE basketball lessons. The implementation of this model can create a more active, meaningful, and student-centered learning atmosphere, thus making a positive contribution to improving the quality of Physical Education (PE)learning.

CONCLUSION

Based on the research results and discussion, it can be concluded that the implementation of the Sport Education Model has a positive and impact on enchancing students learning motivation in Physical Education (PE), Sports, and Health basketball at State Vocational High School 1 South Indralaya. Students who participated in learning with the Sport Education Model showed a higher increase in learning motivation compared to students who participated in conventional learning. This occurs because the Sport Education Model is able to create more active, meaningful, and student-centered learning through role involvement, teamwork, and learning experiences that resemble real sports situations. Thus, the Sport Education Model can be used as an alternative Physical Education (PE) learning model to continuously increase student learning motivation.

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