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FITNESS EDUCATION MODEL TO IMPROVE LEARNING ACHIEVEMENT OF PJOK SUBJECTS: A FOCUS SENIOR HIGH SCHOOL STUDENTS

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ABSTRACT

This study aimed to assess the effectiveness of the Fitness Education Model in enhancing learning achievement in physical education, sports, and health subjects among students at public senior high schools. The study used a quasi-experimental method with a nonequivalent control group pretest-posttest design. Students from public senior high school 1 Polewali comprised the study's population, and the n-stage random sampling technique selected a sample of 50 students, including 30 males and 20 females. We collected data through observation and questionnaires. Data analysis used a t-test with a significance level of 5% to compare the results of the pretest and posttest. The results showed that the implementation of the Fitness Education Model was effective in improving student learning achievement compared to conventional methods. Students in the experimental group experienced an average increase in posttest scores of 17.5 points, compared to 9.5 points in the control group. Statistical tests showed a significant difference ($p < 0.05$) between the two groups. In addition, qualitative observations indicated that students in the experimental group were more active, motivated, and showed better social engagement than the control group. Therefore, we can conclude that the Fitness Education Model not only enhances students' motor and cognitive skills but also fosters the development of character traits like responsibility and cooperation.

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1. INTRODUCTION

Instilling physical education, sports, and health from childhood is beneficial, as it provides a foundation for a variety of activities (Siedentop & Van der Mars, 2022). Adults often attribute their own hobbies to childhood experiences. Elementary school age has a significant impact on the development of quality students in the future, enabling them to develop their own skills and abilities (Pangrazi & Beighle, 2019). Elementary schools divide basic movement skills into three parts: locomotor, non-locomotor, and manipulative (manipulation). According to the aforementioned

viewpoint, physical education has a significant impact on human health. Several letters or verses in Islam emphasize the importance of physical education and sports, stating that these activities not only promote healthy development but also keep students' bodies fresh and enhance their motor skills (Pullia et al., 2022).

The primary goal of implementing physical education, sports, and health in elementary schools is to train and improve movement skills and basic individual abilities. Students should not only master basic sports technique skills but also develop basic locomotor, non-locomotor, and manipulative movement skills (Safruddin et al., 2021). Basically, basic human movements are walking, running, jumping, and throwing. Elementary school students have mastered these basic movements. Elementary school students need to develop basic locomotor movements such as walking, running, and jumping. Elementary school students encounter challenges when learning basic movements, as their locomotor movement abilities are still developing during childhood, hindering the optimal execution of physical education lessons (Donnelly et al., 2016; Zimmer et al., 2016). Lutan asserted that one can apply basic movement abilities in a variety of games, sports, and daily physical activities. Through circuit training play activities, because basically it is a world of play, a child's basic movement skills are developed. Schools present physical education, also known as physical education, sports, and health, as one of their subjects from elementary school to high school (Brusseau et al., 2020; Habyarimana et al., 2022).

Physical education, an integral part of overall education, aims to develop aspects of physical fitness, motor skills, critical thinking skills, social skills, reasoning, emotional stability, moral actions, and healthy lifestyles (Mitchell & Walton-Fisette, 2021; Evans & Sims, 2022). It also introduces a clean environment through selected physical activities, systematically planned to achieve educational goals.

Students' physical education experience significantly boosts their participation in physical activity and sports, thereby enhancing their overall well-being and health (Kliziene et al., 2021; Herbert, 2022). Therefore, it is not surprising that improving the quality and effectiveness of the teaching and learning process in physical education has always been the focus of attention for all parties who care about education. To date, the conduct of the physical education learning process has remained conservative (Wilkinson et al., 2021; Buecker et al., 2021; Lohman et al., 2021). This implies that the teacher remains at the center of the learning pattern (teacher-centered), imparting basic sports techniques that are distinct from the actual game of a specific sport. On the other hand, the sports education model prioritizes direct student involvement, packaging the learning program into sports competitions (Thompson et al., 2022; López-Lemus et al., 2023). This method is believed to be able to develop aspects of physical fitness, motor skills, critical thinking skills, social skills, reasoning, emotional stability, positive moral actions, and healthy lifestyles, as well as introduce a clean environment through selected physical activities.

This method is not considered in accordance with the concept of "developmentally appropriate practices." In reality, most students find this method less enjoyable and do not actively participate in it. In other words, schools solely focus their basic

competencies and competency standards on movement learning, also known as motor learning (Pullen et al., 2020; Lorås, 2020).

Field observations in several elementary, junior high, and high schools reveal that basic sports techniques and the actual fitness education atmosphere still receive separate deliveries of learning. When conducting fitness education, the program fails to align with the students' abilities and loses its sporting essence. Moreover, the learning process does not provide students with a complete experience in sports.

According to Siedentop, the physical education learning process in general does not take place completely, so that the three aspects of physical education are not achieved properly (Siedentop & Van der Mars, 2022). Students tend to acquire sports skills through teacher knowledge alone, while teachers teach physical education materials based on existing syllabuses (Jacobs et al., 2013; Tolgfors et al., 2022; Tolgfors et al., 2024). Therefore, based on the previous conception and description, the author intends to conduct research on the sports education model in physical education subjects at the high school level. Specifically, this study aimed to assess the effectiveness of the fitness education model in enhancing learning outcomes in physical education, sports, and health subjects among students at public senior high schools.

2. METHOD

Study employs a quasi-experimental method. In this study, there were only two groups: one group received treatment in the form of a sport education model, while the other group received treatment in the form of a conventional learning model, serving as a control group. The study employed a non-equivalent control group research design. The study's population consisted of 50 students from public senior high schools 1 Polewali, who willingly participated in the research, provided the author considered their availability for two 24-hour periods.

The study lasted for five months (from January to May 2024). Research participants filled out a student active participation questionnaire, which we used as an instrument both before and after treatment. Prior to data collection, participants completed a questionnaire that included details such as their full name, age, and other relevant information. This data aims to coordinate/organize samples according to the required criteria. We then analyzed the field data using a t-test at a significant level of 5%. We analyzed the data in this study using the Statistical Package for Social Science (SPSS) series 2 program.

3. RESULTS AND DISCUSSION

Pre-Test and Post-Test Results in Experimental and Control Groups

We conducted an initial measurement (pre-test) before the treatment to determine the initial level of student learning outcomes in both groups. Following completion of the learning process using the fitness education model in the experimental group and the

conventional method in the control group, we conducted a final measurement (post-test) to evaluate the resulting changes. Here are the results:

- Experimental Group (Fitness Education Model): Pre-test average: 65.3, Post-test average: 82.8, Score increase: 17.5 points
- Control Group (Conventional Learning): Pre-test average: 64.1, Post-test average: 73.6, Score increase: 9.5 points

From the results above, it is clear that the increase in learning outcomes in the experimental group that followed the Fitness Education Model was much greater than in the control group. The increase of 17.5 points in the experimental group shows that this method is very effective in improving student learning outcomes compared to the increase of 9.5 points in the control group.

Statistical Analysis: Paired T-test

We conducted a paired t-test to ensure the statistical significance of the difference between the pre-test and post-test in both groups. We reported the test results for both groups.

- Experimental Group: $t = 4.89$, $p < 0.05$

These results indicate that there is a very significant difference between the pre-test and post-test in the experimental group. Research demonstrates that the Fitness Education Model application significantly enhances student learning outcomes in PJOK subjects.

- Control Group: $t = 1.72$, $p > 0.05$

Although there was an increase in student learning outcomes in the control group, the difference was not statistically significant. This indicates that conventional learning methods do not have a significant impact on improving student learning outcomes.

Normality and Homogeneity Test

We conducted a normality test to ensure a normal data distribution and a homogeneity test to verify the equality of variance between the two groups before moving on to further analysis.

- Normality Test (Shapiro-Wilk Test): In both groups, the test results showed that the data were normally distributed ($p > 0.05$), so parametric analysis could be used.
- Homogeneity Test (Levene's Test):The homogeneity test results revealed that both groups' data variance was homogeneous ($p > 0.05$), indicating that both groups had the same variability prior to the treatment.

The Influence of the Implementation of the Fitness Education Model

Based on the results of statistical tests, the Fitness Education Model has a very significant influence on student learning outcomes. The application of this model not only improves overall learning outcomes but also has a positive impact on student engagement in the learning process. Here are some key findings that support the effectiveness of this model:

Improved Motor Skills:

Students who participated in the Fitness Education Model showed significant development in basic motor skills, including movement coordination, speed, and agility. A higher increase in post-test scores on the physical skills aspect compared to the control group indicates this. These results are in line with previous studies showing that fitness-based learning can improve motor skills more effectively (Fu et al., 2013; Adams et al., 2024).

Increased Learning Motivation:

The fitness education model also succeeded in increasing student learning motivation (Montoya et al., 2020). The experimental group's students demonstrated increased interest in the taught material and enthusiastically participated in every physical activity. They felt more responsible for their own learning process, which contributed to improved learning outcomes.

Active Involvement in Learning:

In addition to improving motor skills, students in the experimental group also showed more active involvement in group discussions and activities. The Fitness Education Model facilitates collaboration between students, which indirectly improves social skills and teamwork skills (Cojocaru et al., 2022). This is in contrast to the control group, where students tend to be more passive during the learning process.

Model Effectiveness Analysis

We measured the effectiveness of the fitness education model by calculating the effect size using Cohen's d. The calculation results revealed that Cohen's d = 0.88 falls into the large effect category. This indicates that this model has a strong impact on student learning outcomes, far beyond conventional learning methods.

In addition to quantitative results, observations during the learning process also showed that students in the experimental group were more enthusiastic about participating in physical activities, collaborating with group members, and trying harder to achieve the learning targets set. Teachers also reported that students who participated in the Fitness Education Model were more independent in solving problems and showed an increase in mastery of the concepts taught.

Although this study only measured short-term learning outcomes, the observation results show the potential long-term impact of the Fitness Education Model. Students who are actively involved in physical learning with a fitness approach tend to have a more positive view of physical activity and sports, which can impact their healthy lifestyle in the future.

The application of the Fitness Education Model also contributes to the development of student character (Dewi & Alam, 2020). In addition to cognitive and motor aspects, this model also supports the development of social skills, such as cooperation, leadership, and responsibility, which are important values in physical education. We measured the effectiveness of the fitness education model by calculating the effect size using Cohen's d. The calculation results revealed that Cohen's d = 0.88 falls into the large effect category. This indicates that this model has a strong impact on student learning outcomes, far beyond conventional learning methods.

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Although this study only measured short-term learning outcomes, the observation results show the potential long-term impact of the Fitness Education Model. Students who are actively involved in physical learning with a fitness approach tend to have a more positive view of physical activity and sports, which can impact their healthy lifestyle in the future.

4. CONCLUSION

This study shows that the implementation of the Fitness Education Model significantly improves students' learning outcomes in the Physical Education subject at public senior high school 1 Polewali. The experimental group recorded an average increase in post-test scores of 17.5 points, compared to 9.5 points in the control group. In addition, this model increases students' active involvement, supports the development of psychomotor skills such as coordination and speed, and forms positive characteristics such as responsibility, cooperation, and leadership. These results confirm that the fitness education model is more effective than conventional learning methods.

We recommend formally integrating the Fitness Education Model into the Physical Education curriculum to enhance students' learning outcomes, psychomotor skills, and character. Teachers need to receive special training to implement this model effectively in the classroom. Further research is necessary to investigate the impact of this model on other aspects, including long-term learning motivation, social skills, and its application to diverse student groups.

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