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DEVELOPMENT OF PJOK LEARNING E-MODULE BASED ON PLAY ACTIVITIES ON PHYSICAL FRESHNESS MATERIALS FOR GRADE 2 JUNIOR HIGH SCHOOL

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Abstract. This research aims to develop a game-based physical education and sports e-module on physical fitness materials for 8th grade students. The data in this study were analyzed using Miles & Huberman's qualitative data analysis technique which includes data reduction, data presentation, and conclusion drawing. In the analysis stage, a needs analysis, curriculum analysis, and student characteristics analysis were carried out through observations, interviews, and literature studies. Based on the analysis results, the e-module was designed by integrating physical fitness materials and game activities suitable for junior high school students' characteristics. The e-module development involved creating interactive multimedia, educational games, and formative evaluations. The e-module implementation was conducted in 8th grade classes, followed by a summative evaluation to test the product's effectiveness. The research results show that this game-based physical education e-module is effective in improving students' understanding of physical fitness concepts and active participation in physical activities. This product can be used as an innovative and engaging alternative learning resource for students in learning physical fitness materials.

Keywords: E-Module, Physical Education and Sports, physical fitness, game activities, junior high school.

I. INTRODUCTION

Education is a complex activity that involves various interconnected components aimed at achieving educational goals (Widana & Septiari, 2021). It encompasses all learning knowledge that positively influences individual growth and continues throughout life (Febrianti, 2021, p. 14). As Arifah (2014, p. 681) states, education is crucial for guiding children towards better and more responsible actions. Education is an effort to change the behavior of individuals or groups through the process of teaching or transferring knowledge, values, and personality formation.

Physical education (PE) is an educational process that utilizes physical activities and health to produce holistic changes in an individual's physical, mental, and emotional quality (Husdarta, 2015, p. 3). It is an integral part of the overall education system, as it uses physical activities as the core of the learning process. Psychologically, education involving physical activities is essential for psychomotor, cognitive development, and student progress, making PE, sports, and health education a subject implemented at every educational level (Sukarini, 2020). The purpose of PE is to provide various movement introductions, basic motor skills, and aspects of physical, mental, emotional, and social

development in a more positive direction. Additionally, PE equips students with theoretical knowledge to improve the quality of life and health (Bayu, 2015).

According to Hurlock (1993, p. 320), play is essential for a child's holistic development—physical, intellectual, social, moral, and emotional. It is a prerequisite for future skills and is an activity undertaken for enjoyment without concern for outcomes. Moreover, play is a self-regulated activity without standardized rules but rather determined by the players themselves. Based on this understanding, small games have significant benefits in life for both adults and children. In this context, small games can be developed and implemented by PE teachers in schools as they can influence physical fitness, motivation, physical growth and development, intellectual development, social-emotional cooperation, academic achievement, and the physical condition of students.

However, problems arise due to the lack of PE learning processes, mainly due to limited learning facilities and infrastructure in schools, both in quantity and quality. Other influencing factors include the lack of support, creativity, and innovation from educators, who are responsible for implementing PE. Additionally, limited infrastructure in

schools and the restricted time allocation available to PE teachers pose challenges.

PE educators often lack teaching materials, whether provided by the government or developed independently, to design engaging learning activities. Physical fitness material is taught in the second grade of junior high school, focusing on basic physical activities to enhance fitness elements such as speed, strength, flexibility, agility, and more. However, monotonous teaching practices often lead to a lack of student enthusiasm for learning. Therefore, educators need to be creative in modifying learning activities to create enjoyable experiences for students. When teaching physical fitness material, educators often focus only on basic movements performed on the school field, without incorporating interesting activities or modifying the learning process to make students more active in improving motor skills.

Teaching materials are all tools or materials that can be used in the learning process and are tailored to the competencies that students aim to achieve, such as textbooks, modules, handouts, worksheets, models, audio teaching materials, interactive teaching materials, and more (Hernawan et al., n.d.).

The importance of Physical Education, Sports, and Health (PJOK) in the school curriculum cannot be overstated, as it plays a crucial role in promoting students' physical fitness, mental well-being, and social skills. However, despite its significance, many educators face challenges in delivering effective PJOK lessons that engage students and foster a deep understanding of physical health concepts. Traditional teaching methods often fail to capture the interest of students, leading to low participation rates and a lack of enthusiasm for physical activities. This issue is particularly evident in junior high schools, where students are at a critical age for developing lifelong healthy habits.

Observations and interviews conducted in various schools, including SD N 1 Harapan Jaya Bandar Lampung, reveal that many teachers struggle with the lack of adequate teaching materials specifically designed for PJOK. The absence of comprehensive and engaging resources has made it difficult for educators to implement effective lessons that meet the diverse needs of their students. As a result, there is a growing demand for innovative teaching tools that can enhance the quality of PJOK education and make learning more interactive and enjoyable for students.

One of the most promising solutions to this problem is the development of e-modules that integrate play-based activities into the PJOK curriculum. These e-modules offer a modern approach to teaching physical education by leveraging digital technology to create an interactive learning environment. By incorporating games, multimedia content, and formative assessments, e-modules can make the learning experience more dynamic and tailored to the needs of students. This approach not only helps in maintaining students' interest but also ensures that they gain a thorough understanding of the concepts being taught.

The development of an e-module specifically focused on physical fitness, designed for 2nd-grade junior high school students, represents a significant step towards addressing the

challenges faced by PJOK educators. This e-module is not just a digital version of traditional textbooks; it is a comprehensive learning tool that integrates educational games, interactive activities, and multimedia content to create a more engaging learning experience. The aim is to make physical education more accessible and appealing to students, thereby increasing their motivation to participate in physical activities both in school and at home.

In designing the e-module, careful consideration was given to the curriculum requirements and the specific characteristics of junior high school students. The content was developed to align with the learning objectives of the PJOK curriculum, ensuring that students receive a well-rounded education in physical fitness. Additionally, the inclusion of play-based activities was based on the understanding that students learn best when they are actively engaged and enjoying the learning process. By making learning fun and interactive, the e-module seeks to address the issue of student disengagement in PJOK classes.

The implementation of the e-module in 2nd-grade classes was followed by a rigorous evaluation process to assess its effectiveness. This evaluation involved both formative and summative assessments to measure students' understanding of physical fitness concepts and their level of engagement in the activities. The results of these assessments were overwhelmingly positive, indicating that the e-module successfully enhanced students' knowledge and participation in PJOK. Teachers reported that students were more motivated to engage in physical activities and demonstrated a better grasp of the material covered in the lessons.

II. METHODS

In this research, the methods of data collection were carefully chosen to align with the study's objectives. The primary techniques employed included observation, interviews, and a literature review. The observation method used was non-participant observation, where the researcher did not actively engage with the participants but instead observed from a distance without a predetermined focus. This approach allowed the researcher to freely record observations that were relevant and noteworthy. The observation was conducted at SD N 1 Harapan Jaya Bandar Lampung, focusing on the challenges faced by teachers in delivering effective physical education lessons and the need for better teaching materials.

Interviews were also a key part of the data collection process. The researcher used semi-structured interviews to gather in-depth insights from a physical education teacher at the same school. This approach allowed for flexibility in exploring various issues, revealing that the existing teaching materials were outdated, unengaging, and failed to foster student interest in physical activity. The interview highlighted the necessity for developing new, more interactive teaching resources, such as an e-module based on play activities.

In addition to primary data collection, the researcher conducted a thorough literature review. This step was essential for understanding the theoretical foundations of the

study and for supporting the research with existing knowledge in the field.

For data analysis, the research followed an inductive approach, which involved systematically organizing and interpreting the data to draw meaningful conclusions. The process included data collection, data reduction, data presentation, and conclusion drawing/verification, as outlined by Miles and Huberman. Data reduction was a

critical step, where unnecessary information was filtered out, leaving only the most pertinent data. The remaining data was then organized and presented in a way that allowed the researcher to identify significant patterns and trends. Finally, conclusions were drawn and continuously verified throughout the research process to ensure their validity and reliability, following the interactive model of data analysis proposed by Miles and Huberman.

Table 1. Observation Results of SD N 1 Harapan Jaya Bandar Lampung

Statement	Answer	
	Yes	No
Teachers have difficulty implementing effective PJOK learning	7	3
Limitations of modules or special teacher handbooks on PJOK learning	8	2
Teachers need E-modules for PJOK learning based on play activities	10	0

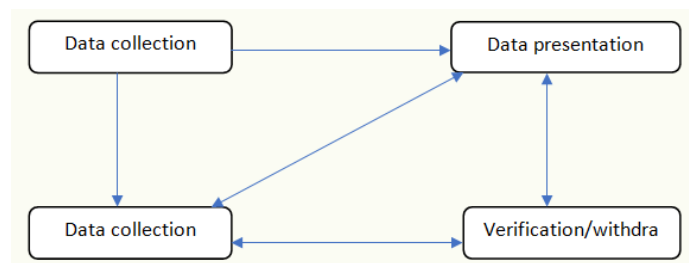


Figure 1: Miles and Huberman Interactive Data Analysis Model

III. FINDINGS AND DISCUSSION

The findings from the research indicate several challenges faced by teachers in delivering effective physical education (PJOK) lessons. Specifically, 7 teachers reported difficulties in conducting effective PJOK classes, 8 teachers noted a lack of specialized modules or guidebooks for PJOK instruction, and 10 teachers expressed a need for an e-module based on play activities. Teachers believe that such an e-module, particularly focused on physical fitness through play-based activities, would greatly enhance both teachers' and students' ability to access and engage with the material, whether in the classroom or at home.

Given these findings, there is a clear need for the development of an e-module for PJOK that incorporates play-based learning, especially for 8th-grade students. This research leads to the proposed project titled "Development of a PJOK E-Module on Physical Fitness Material for 8th Grade Based on Play Activities." The goal of this development is to create an innovative, engaging, and enjoyable learning experience that not only captivates students' interest but also contributes positively to their physical and cognitive development. By introducing this e-module, the study aims to address the current gaps in PJOK

teaching materials and provide a resource that enhances the overall educational experience.

The implementation of a play-based e-module in PJOK is expected to bridge the gap between traditional teaching methods and the needs of contemporary students. As the educational landscape evolves, there is a growing recognition that engaging, interactive learning tools can significantly improve student outcomes. An e-module that integrates play not only aligns with these educational trends but also addresses the specific challenges identified by the teachers in this study. By focusing on activities that are both educational and enjoyable, the e-module can make the learning process more dynamic and effective, particularly in promoting physical fitness among students.

Furthermore, the development of this e-module will be grounded in principles of instructional design that prioritize user engagement and ease of access. The inclusion of multimedia elements such as videos, animations, and interactive exercises will cater to diverse learning styles and help students better understand and retain the material. Teachers, on the other hand, will benefit from a structured, ready-to-use resource that reduces the preparation time and allows them to focus more on facilitating active learning in the classroom. This dual benefit for both students and

teachers underscores the potential impact of the e-module on the overall quality of PJOK instruction.

Moreover, this initiative aligns with broader educational goals of integrating technology into the classroom. The use of digital tools in education is no longer a novelty but a necessity, especially in a post-pandemic world where remote learning has become an integral part of the educational process. An e-module designed with these considerations in mind will not only be relevant in traditional classroom settings but also adaptable for hybrid or fully remote learning environments. This flexibility ensures that the e-module remains a valuable resource regardless of the teaching context, thereby contributing to the resilience and adaptability of the educational system.

In conclusion, the development of a PJOK e-module focused on physical fitness and play-based activities represents a significant step forward in enhancing the effectiveness of physical education in schools. By addressing the specific needs of teachers and students, this e-module has the potential to transform the way physical education is taught and learned, making it more engaging, accessible, and impactful. As the project moves forward, it will be essential to involve key stakeholders, including educators, students, and curriculum developers, to ensure that the final product meets the highest standards of educational quality and relevance.

IV. CONCLUSION

The research conclusively demonstrates that the development of the PJOK e-module, which integrates play-based activities with physical fitness content, effectively addresses the educational needs of 2nd-grade junior high school students. This innovative e-module not only enhances students' understanding of physical fitness concepts but also significantly increases their active participation in physical activities. The study validates the e-module as a highly effective and engaging alternative learning resource, capable of transforming traditional physical education methods into a more dynamic, enjoyable, and educational experience, thereby fulfilling the research's objective of creating an impactful and relevant teaching tool.

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