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Effectiveness of learning physical education knowledge aspects using digital book

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Abstract

The purpose of this study was to determine how the effectiveness of digital books in physical education subjects on the learning outcomes of knowledge aspects of class VII students at junior high school level. This type of research is quantitative research. The population in this study were all seventh grade students of junior high schools in Musi Banyuasin Regency. The sampling technique used in this study was random sampling. The sample used in this study consisted of 3 schools in Musi Banyuasin Regency consisting of SMPN 1 Sekayu, SMPN 8 Sekayu and SMPN 12 Sekayu with 100 seventh grade students. Data collection was done with a learning outcome test and analyzed by looking at the score category of students in the knowledge aspect. The results of this study reveal that digital books are effectively used by seventh grade students at the junior high school level in physical education learning. The results of this study indicate that the low number of students who get interpretations with the category needs guidance and the percentage of good and very good interpretations obtained 88%, it can be said that the learning process is good enough which means that digital books are effectively used in physical education learning.

Keywords: Digital books, learning outcomes, physical education.

Introduction

Education is one of the forums that plays an important role in the progress of the nation and state in all aspects. Education means a dynamic force in the life of every individual, which affects physical development, mental development, social development, as well as the development of morality. Education is a gradual, programmed, and continuous activity (Uno & Amatenggo, 2022) ^[12]. The meaning of education itself according to Ki Hajar Dewantara is an effort to advance the character, mind, and body of children, in order to advance the perfection of life, namely life and life of children in harmony with nature and society. Education is the most important thing, because a good and quality education allows a person to live anywhere (Berggren *et al.*, 2021) ^[2]. Teachers are required to be creative and innovative in packaging physical education learning with a variety of concepts and media that can be used so as to make students more optimal in learning. The more developed times in the era of globalization, the more facilities and infrastructure that can support the physical education learning process. Technology can act as a platform to encourage creative learning and innovative teaching (Ferrari *et al.*, 2009). According to Zain (2021) ^[13] technology plays an important role in providing education to people in developing countries where people can access knowledge and learn through digital technology.

Digital books are one type of textbook that can be used in physical education learning. The utilization of digital technology to support the teaching and learning process in the world of education has developed rapidly following the times, especially physical education learning can also be supported by digital technology in the teaching and learning process. According to Koekoek & Van Hilvoorde (2018) ^[7] digital technology can lead to increased student interest in learning, such as in physical education learning. According to Perdana *et al.*, (2021)) digital-based platforms in educational aspects will open up opportunities for technology utilization, create a more dynamic learning atmosphere, and have a high level of accessibility. Johnson (2019) ^[5] highlights several advantages of digital books compared to printed books.

These advantages include portability, accessibility, content searchability, and adaptability to individual learning needs. According to Karliani *et al.*, (2021) ^[6] digital books are technological innovations in the learning process and are media that can facilitate students so that students can learn independently so that they can become solutions and alternatives to learning media and learning resources for students.

According to Nopembri & Sugiyama (2022) ^[8] Physical education and sports can improve psychosocial aspects while reducing negative psychological aspects (depression, anxiety, and stress). According to Syafruddin *et al.*, (2022) ^[11] broadly speaking, physical education is an integral part of education which includes 3 aspects, namely cognitive aspects, affective aspects, and psychomotor aspects. The lack of quality learning books owned by students can cause a lack of insight into the knowledge of students so that it is difficult to find topics related to learning material and difficulty understanding the concept of learning itself (Ginantara & Aguss, 2022) ^[4]. Based on these problems, good learning media in learning physical education game material must adjust to the reader's learning style. According to Alzain *et al.*, (2018) ^[1] learning style instruments depend on the textual form of information to present items. Therefore, books with learning videos on each basic technique can help someone to facilitate understanding of the basic techniques of the material contained in physical education lessons. Stewart (2018) ^[10] investigated readers' preferences regarding digital books versus printed books. The results show that there is a significant difference in preference between generations, with younger generations more likely to prefer digital books, while older generations prefer printed books.

The problem in this study is how the effectiveness of learning physical education game material aspects of knowledge using digital books in class VII students at junior high school level.

Research Methods

This type of research is a quantitative study that aims to determine the effectiveness of using digital books in physical education learning at the junior high school level. The population in this study were all seventh grade students of junior high schools in Musi Banyuasin Regency. The sampling technique used in this study was random sampling. The sample used in this study consisted of 3 schools in Musi Banyuasin Regency with 100 seventh grade students.

Data collection is done with a learning outcome test and analyzed by looking at the category of students' scores in the knowledge aspect.

Table 1: Interval score determination of knowledge mastery level and learner skills

No.	Value	Interpension / Category
1	0-60	Need guidance
2	61-70	Simply
3	71-80	Good
4	80-100	Very good
Maximum score = 100		

Description of score processing

Maximum score: 100

Learner acquisition score: SP

The skill score obtained by the learner: SP/100

Results

The trial use of digital books for 2-3 weeks on grade VII students at the junior high school level totaling 100 students, consisting of SMP Negeri 1 Sekayu, SMP Negeri 8 Sekayu

and SMP Negeri 12 Sekayu. Data were analyzed through measurement of students' learning outcomes in the knowledge aspect.

Table 2: Measurement data of students' learning outcomes knowledge aspect

No.	Interpension/Category	Learners with Qualifications (Person)
1	Need guidance	7
2	Simply	5
3	Good	23
4	Very good	65
Maximum score = 100		

The results obtained from the learning outcomes test of 100 students who have used digital books as learning media include, there are 7 seventh grade students who fall into the category of scores needing guidance who get learning outcomes 0-60, 5 students who fall into the category of sufficient scores who get learning outcomes 61-70, 23 seventh grade students who fall into the category of good scores who get learning outcomes 71-80, 65 seventh grade students who fall into the category of excellent scores who get learning outcomes 81-100.

Learning that refers to the merdeka curriculum, there is no longer a minimum completeness criteria (KKM). However, judging from the low number of students who obtained interpretations with the category needing guidance there were 12% and the percentage of good and very good interpretations obtained 88%, it can be said that the learning process was quite good.

Discussion

The results of the study stated that digital books were effectively used by seventh grade students at the junior high school level in physical education learning.

Conclusion

The results of the study revealed that digital books are effectively used by seventh grade students at the junior high school level in physical education learning.

- The results of this study indicate that the low number of students who obtained interpretations in the category of needing guidance and the percentage of good and very good interpretations obtained 88%.
- The results of this study indicate that the learning process is good enough which means that digital books are effectively used in physical education learning.

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