

Analysis of the Needs of Traditional Games Based on Android as a Medium for Learning Physics

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ABSTRACT

This study aims to determine the use of Android-based traditional game physics learning media used by educators in the learning process then to analyze the learning media needed by students and to connect based on the learning media to be developed. This study is a data collection carried out using a questionnaire instrument for students and teachers which was conducted in December-January 2020. The results of the questionnaire obtained included 64 students and 5 high school physics teachers in Jakarta. The results of the preliminary study questionnaire show that: 1) Of the 63 students (78.1%) chose digital educational games needed for the learning process to take place. 2) (75%) agree that educators use educational games as a learning medium in class, 3); As many as (78.1%), students thought that the relationship between educational games as a learning medium in class, and (31.3%) chose laptops as a learning medium in the classroom. The material or subject that is appropriate for the making of these questions is static fluid material. Therefore, the researcher intends to use game media as a discussion of the questions when the material takes place. It is hoped that students can process thinking skills through the given tests.

Keywords: *Physics Learning Media, Traditional Games, Android*

INTRODUCTION

Media is the plural form of medium which comes from the Latin "medius" which means middle. In Indonesian, the word medium is defined as "between" or "medium" [1]. The definition of learning media according to Latuheru (1998: 14) learning media are all tools (aids) or objects used for teaching and learning activities, to convey messages (information) of learning from sources (teachers and other sources) to the recipient (in this case the child) [1]. Students or learning citizens). Based on the expert's opinion, it can be concluded that the learning media is a tool to convey messages from sources to the receiver.

Sadiman (2014: 7) explains that learning media are anything that can be used to transmit messages from the sender to the message recipient. In this case, it is the process of stimulating students' thoughts, feelings, attention, and interests so that the learning process can be intertwined [2].

Based on this statement, it can be concluded that the learning media is a tool used by the teacher as a teaching aid. In learning interactions, the teacher delivers teaching messages in the form of learning material to students.

Based on some of the opinions above, it can be concluded that the notion of learning media as a teaching aid to convey material so that messages are more easily accepted and make students more motivated and active.

Quoted in the instructional media book by Kustandi (2016) that the use of learning media in the teaching and learning process can generate new desires and interests, generate motivation and stimulation of learning activities, and even bring psychological influences on students [3].

One way for students to have a concrete experience is to use learning media in the learning and teaching process [4].

Game is an English word that means a game or match, or it can be interpreted as a structured activity that is usually done for fun.

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Based on the description above, it can be concluded that a game or game is a form of activity that is carried out with certain rules.

In the large English dictionary, education means education, meanwhile According to Sugihartono education comes from the word educate, or educate, which means maintaining and forming exercises [5].

Education is a learning process that is obtained by every human being, in this case, the students, the goal is to make students understand, understand, and be able to think more critically. Education can be formulated as a guide for human growth from birth to physical and spiritual maturity, in the interaction of nature and the community. It can be concluded that education is a learning activity carried out by educators in achieving a goal that has been designed by educators to improve students in character.

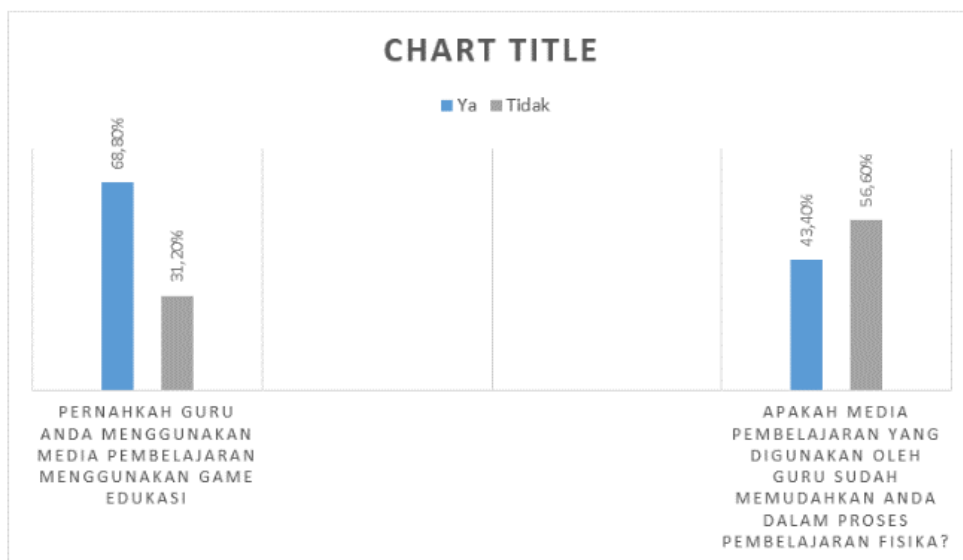
RESEARCH METHOD

The research design used is development (Research and Development, R&D) which aims to develop physics learning media based on Traditional Engklek Games. Research and Development is a research method used to produce new products. This development model uses Sugiyono with 10 steps of research. This research adopts Sugiyono research and development steps with 10 research steps. Then because of the researcher's needs, the researcher only adopted 8 research steps, namely; 1) Problem Identification; 2) data collection; 3) Product Design 4) Design Validation 5) Design Revision 6) Product Trial 7) Product Revision 8) Usage trial 9) Product revision and 10) Mass production

Information obtained from data collection results from a needs analysis questionnaire conducted at the beginning. The questionnaire contains many questions to explore preliminary information about the use of learning media used by students and then analyzes the form of learning media that students need.

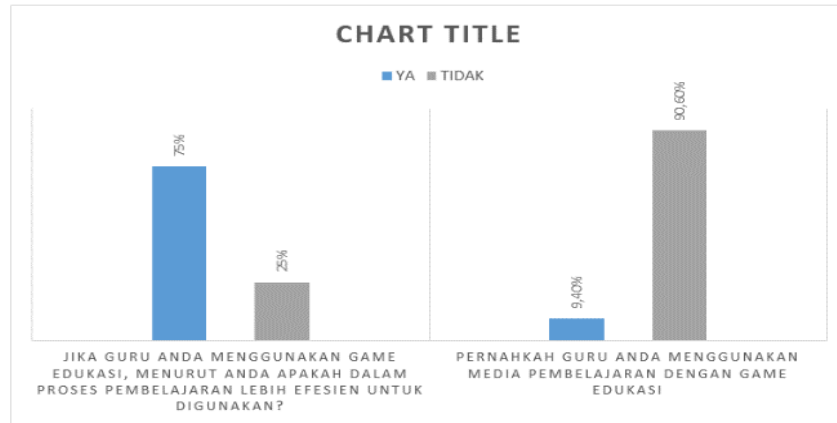
RESULTS AND DISCUSSION

In this study, the results obtained can be seen in the graph below:



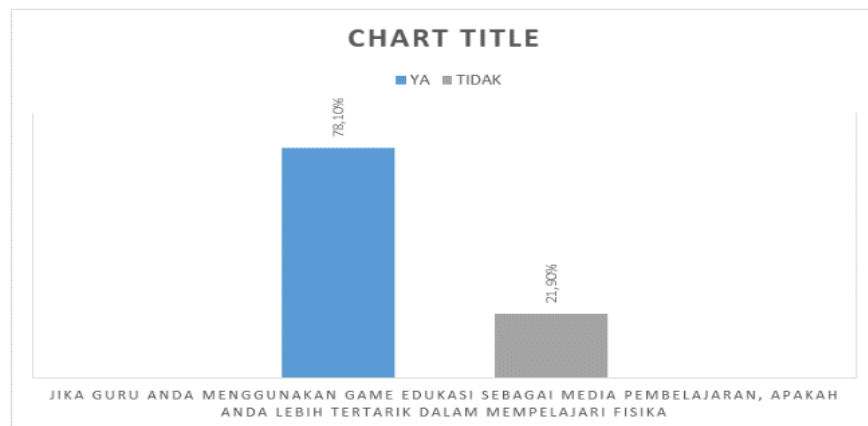
Graph 1. The results of the analysis of student needs regarding the media taught by the teacher and the results of the media being taught

Based on the results of the questionnaire, it is known that out of 64 students (68.8%) used media and only (31.2%) answered no. Based on the results of the questionnaire, it is known that out of 64 students (56.6%) answered no and (43.4) answered yes (Graph 1).



Graph 2. The results of the analysis of student needs regarding learning media for physics educational games

Based on the results of the questionnaire, it is known that as many as (75%) students think that learning efficiency using educational games is needed and (90.6%) student-teacher respondents have never used educational games in the process of learning physics in class.



Graph 3. The results of the analysis of student needs regarding the relationship in learning physics

Based on the results of the questionnaire, it is known that as many as (78.1%) students think that it is related to learning physics if the learning media uses educational games.

CONCLUSIONS

From the results of the research conducted, students argued that physics is a difficult subject to learn. In physics learning that is carried out usually is monotonous with the use of the lecture method applied by the teacher. Meanwhile, the teaching and learning process activities in schools should be packaged attractively, so that the learning process does not feel boring and students are enthusiastic about participating in learning. And the use of learning media appropriately can stimulate and involve students to be active, creative, and create enjoyable learning and in the end, it will improve the quality of learning.

The physics game media is very supportive of learning physics which requires questions and answers in detail and these questions have a real picture, natural phenomena, or a demonstration of physics experiments. By presenting audio-visual media, it is hoped that it can provide an educational effect such as educating students to think critically, providing meaningful experiences, and developing and broadening students' thinking horizons.

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The results of the needs analysis state that students need to develop physics learning media using traditional games based on android.

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