Indonesian Journal of Education & Mathematical Science
Vol. 4, No. 3, September 2023, pp. 149~152
ISSN: 2715-985X, DOI: 10.30596/ijems.v4i3.16337

The Development of Interactive Multimedia Using Smart Apps Creator Applications in Class VII Junior High School Informatics Subjects

Randhi Lasepdika Kasna[1], Syafril[2], Fetri Yeni J[3], Novrianti[4]
[1,2,3,4]Universitas Negeri Padang, Padang, Indonesia
[1,3] randhikasna26@gmail.com, [2]syafril@fip.unp.ac.id, [3]fetriyeni@fip.unp.ac.id, [4]novrianti@ac.id

ABSTRACT

This research was motivated by challenges that are often faced by students, namely difficulty understanding the subject matter. This is due to several factors, such as the dominance of learning approaches that involve oral explanations from teachers in class, activities to record or summarize lessons, the material presented in teaching material books is only concise, and the lack of use of learning media-based teaching materials by teachers and schools. The purpose of this study is to create interactive multimedia based on appropriate development procedures, adhering to standards of validity and practicality criteria. Thus, the end goal is to produce interactive multimedia that can be considered appropriate for use in the learning process. The type and method of research used in this study is research and development (Research and Development-R & D) by applying a 4-D model. The development process in this study consisted of four stages, such as Define, Design, Development, and Disseminate). The evaluation of product validity was carried out through the participation of three experts, consisting of two validator experts in the media field and one validator expert in the material field. In addition, the product practicality test was carried out involving 16 students from grade VII of SMP Pertiwi 2 Padang. The results of this study showed that the evaluation of media validator experts was declared as "Very Valid", with the average value of the first validator of 4.93 or 98.6% and the second validator with the same average value. Meanwhile, the assessment from expert material validators also received the "Very Valid" category, with an average score of 4.79 or 95.6%. Practicality tests on interactive multimedia show that the product is in the "Very Practical" category, with an average score of 4.73 or 94.6%. In conclusion, the interactive multimedia developed for class VII Informatics subjects has proven to be very valid and practical. Thus, this interactive multimedia is feasible to be used in the learning process.

Keyword: Development, Interactive Multimedia, Smart Apps Creator

This work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

Corresponding Author:
Syafril,
Technology of Education,
Universitas Negeri Padang,
Jalan Air Tawar Barat, Indonesia.
syafril@fip.unp.ac.id

1. INTRODUCTION

Human presence is always tied to the learning experience. From the very beginning of birth, a child begins to recognize such processes as crawling, walking, and talking. The experience develops in a variety of ways, both intentional and unexpected, and is ongoing, encouraging student adjustment. This developmental process refers to long-term behavioral changes that include new information, the search for new knowledge, abilities, and tendencies acquired by the individual. As they get older, children learn various things, especially through the educational process they undergo.

Education is an effort to optimize the development of potential and skills, and is one of the important assets in realizing the progress of the nation and improving human ethics. Education is now a very essential thing in our lives. Excellent education will create a young generation who is expected to be the hope and main pillar of the country in achieving development in various fields. This concept is in line with the contents of Law No. 20 of 2003 concerning the national education system which explains that:
"Education is a conscious and planned effort to realize the learning gym and learning process so that students actively develop their potential to have spiritual strength, religion, self-control, personality, intelligence, noble character, and skills needed by themselves, society, nation, and state."

As mentioned earlier, in essence, education is an effort to improve the quality and capability of individual humans. Thus the instructive cycle that takes place should seek to cultivate the possibilities of each person who is an essential component in creating and transforming assisted individuals through pathways of direction, education and inspiration. To make it happen starts from formal quality education

Vol. 4, No. 3, September 2023, pp. 149~152
ISSN: 2715-985X, DOI: 10.30596/ijems.v4i3.16337
obtained from schools. School education is a forum to support the improvement of the quality of human resources.

If you look at the current situation and condition of education, technological developments always overshadow the development of education. This can be seen in updates to aspects of education including materials and media use. The development of technology and the era of the industrial revolution that is increasing have an impact on life, including education. Smartphones and computers are one of the tools that can be used to support learning itself.

Technological developments that occur also make schools must be able to adapt to these developments. The more advanced technology certainly makes the competition tighter. Every school needs to make improvements and reforms to produce the best graduates. To update the learning process used, this is one way to achieve learning and educational goals.

This is in line with the improvement and renewal of the implementation of learning at SMP Pertiwi 2 for Informatics subjects that apply an independent curriculum. The independent curriculum has been prepared based on the objectives of the national education system and national standards of education, while integrating the profile of Pancasila learners. In the 2013 curriculum, Informatics subjects are represented by ICT Guidance as electives, but in the independent curriculum, Informatics subjects are part of the subjects that must be followed.

Based on the author's observations in class VII Informatics subjects at SMP Pertiwi 2 Padang on November 14, 2022, during the learning process there are several problems, problems that are often faced are that students have difficulty understanding the material because it is caused by several things including The learning method is still mostly centered on oral explanations by teachers in the classroom, followed by activities to record or summarize the subject matter. Books used as learning resources only convey material briefly, and until now, the use of teaching materials based on learning media is still not commonly done by teachers and schools.

Until now, there has been no record of teachers implementing learning media with the support of the Smart Apps Creator application in the teaching process. This situation causes students to experience burnout, show a lack of enthusiasm in learning, and do not take enough interest in the learning material. Meanwhile, if students have the motivation to learn, it is very useful to master the subject matter. For this reason, it is necessary for teachers to take advantage of the conditions that occur by using media that are still rarely used in Informatics learning, namely in the form of learning media using the Smart Apps Creator application to create an effective and efficient learning process.

With the development of increasingly sophisticated technology to make learning fun is not a difficult thing. To create fun learning, you can use technology, such as making interactive multimedia to support the fun learning process. Interactive learning media is an efficient teaching media when viewed from the way it is used itself. Interactive multimedia can be used in all subjects, one of which is Informatics.

According to Sutopo (2012: 112), interactive multimedia refers to a form of multimedia that involves a controlling device so that users can control the multimedia process. In this case, the process of running multimedia is determined by the choices and decisions made by the user. A relevant example of this interactive multimedia concept is the learning presentation, where users have the ability to deliver learning material in an engaging and entertaining way. According to Criticos in Daryanto (2013: 4), media or tools are elements of communication that are tasked with conveying stimuli from communicators (teachers) to recipients of communication (students). Balance in communication has a crucial role, because if communication is disrupted, the message proposed by the teacher will be difficult for students to understand. However, if communication is carried out efficiently and effectively, then learning objectives can be achieved more optimally.

One way to stimulate the enthusiasm and independence of student learning through learning media is to develop interactive multimedia. Interactive multimedia can be interpreted as an interactive system that combines various elements such as sound, computer graphics, animation, video clips, still images, and text (Tashpulatovich, 2021). Interactive multimedia has the potential to be used as a substitute option in the delivery of messages by teachers to students.

Indonesian Journal of Education & Mathematical Science
Vol. 4, No. 3, September 2023, pp. 149~152
ISSN: 2715-985X, DOI: 10.30596/ijems.v4i3.16337

One software that can be used in making interactive multimedia is the Smart App Creator application. Smart App Creator is software that can be used to create simple applications that do not need to use coding in making applications. Smart App Creator is one of the applications that supports the creation of interactive multimedia. The interactive multimedia generated from Smart Apps Creator is in the form of an application. Applications that have been generated can be installed on Smartphones or computers. This application will help the learning process because this application is not only glued to writing but can also insert images, videos, audio, and animations into interactive multimedia. Smart Apps Creator focuses more multimedia into the form of applications that will later increase student motivation in understanding the subject matter. Based on the previous presentation, the author intends to conduct research entitled "Development of Interactive Multimedia Using Smart Apps Creator Applications in Class VII Junior High School Informatics Subjects"

2. RESEARCH METHOD

This research adopts research and development (R&D) methods with a focus on product creation, production, or development. The process begins with a needs analysis to design a specific product, which is then evaluated for its feasibility in society. This research utilizes the Smart Apps Creator application and adopts a 4-D development model. Some of the advantages that make this model attractive to researchers are: first, the 4-D model is suitable for developing learning media, not for learning systems; secondly, the model details the steps in a structured manner; Third, the development phase involves evaluation by experts, allowing improvement of learning materials based on their inputs, suggestions, and views before field trials are conducted.

According to Thigarajan, Semmel, and Semmel in Trianto (2012: 93) Data collection techniques involve Smart Apps Creator applications in a 4-D development model, which consists of four stages. The first stage, "Define", focuses on curriculum analysis, student analysis, and concept analysis as the basis for learning media design. The second stage, "Design", involves selecting media, format, and initial design to ensure the content of the learning media is appropriate. The third stage, "Development", continues product development with validity tests and practicality tests involving media experts and students as assessors. The final stage, "Dessiminate", focuses on disseminating products to teachers and students for use in learning. Data from validity tests and practicality tests are analyzed using statistical methods with formulas $\bar{x} = \frac{\Sigma x}{n}$

3. RESULTS AND DISCUSSION

Interactive multimedia is applied in teaching Informatics subjects in class VII, adjusted to learning objectives in order to attract students' interest. In this case, students will be actively involved in learning activities. In order to produce valid and practical learning media, researchers must carry out validity assessments by media experts and material experts, as well as practicality tests through the use of questionnaires with Likert scales filled out by students.

A. Interactive Multimedia Validity Results

Table 1. Media Expert Validity Results

Variable	Media Expert I (%)	Media Expert II (%)
Text	4,67	5
Animation	5	4,67
Audio	5	5
Figure	5	5
Video	5	5
Average	**4,93**	**4,93**

The results of the media validation assessment by the first media expert and the second media expert for text, animation, audio elements, images, and video variables have shown the criteria of "Very Valid".

B. Material Validity Results

Table 2. Materia Expert Validity Result

Variable	%
Content and Purpose	5
Presentation of material	4,5
Test	5
Efficiency	4,5
Average	**4,79**

The results of the material validation assessment by material experts for content and purpose variables, material presentation, tests, and efficiency have shown the criteria of "Very Valid".

C. Practicality Test Results

Table 3. Practicality Test Result

Variable	%
Usage	4,78
Benefits	4,69
Display and Language	4,70
Material Presentation	4,75
Rata-rata	**4,73**

The results of the practicality test conducted by 16 grade VII students of SMP Pertiwi 2 Padang with these results are included in the criteria of "Very Practical".

4. CONCLUSION

Based on the results of the validity test conducted by two media experts and one material expert with “very valid” validity results and the practicality test conducted by 16 grade VII students of SMP Pertiwi 2 Padang with the results of the practicality test is “very practical”. So it can be concluded that interactive multimedia using the smart apps creator application in class VII Junior High School Informatics subjects that have been developed is “very valid” and “very practical”. Then interactive multimedia is worth using in the learning process.

REFERENCES

[1] Arikunto, Suharsimi. (2010). *Management Penelitian*. Jakarta: Rincka Cipta.
[2] Arsyad, Azhar (2007). *Media Pembelajaran*, Jakarta: PT. Raja Grafindo Persada.
[3] Arsyad, Azhar (2011). *Media Pembelajaran*, Jakarta: PT. Raja Grafindo Persada.
[4] Binato, Iwan. (2010). *Multimedia Digital Dasar Teori dan Pengembangan*. Yogyakarta: Andi
[5] Cecep Bustandi. (2011). *Media Pembelajaran Manual dan Digital*, Jakarta: Ghalia Indonesia.
[6] Daryanto, (2010). *Media Pembelajaran*, Jakarta: Gava Media.
[7] Munir. (2008). *Multimedia Konsep dan Aplikasinya dalam Pendidikan*. Bandung: Alfabeta.
[8] Putra, Nusa. (2012). *Research & Development*. Jakarta: Raja Grafindo Persada.
[9] Rusman. (2012). *Model-Model Pembelajaran*. Jakarta: PT Raja Grafindo Persada.
[10] Sutopo, H. A. (2012). *Teknologi Informasi dan Komunikasi dalam Pendidikan*. Yogyakarta: Graha Ilmu.
[11] Sugiyono. (2010). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D. Bandung*: Alfabeta.
[12] Sugiyono. (2018). *Metode Penelitian Kuantitatif, Kualitatif, dan R & D. Bandung*: Alfabeta, CV.
[13] Tashpulatovich, D. I. (2021). *Pengertian dan Penggunaan Multimedia Interaktif dalam Pembelajaran*. Jurnal Teknologi Pendidikan, 17(2), 123-136.
[14] Trianto. (2012). *Model Pembelajaran Terpadu: Konsep, Strategi dan Implementasinya Dalam Kurikulum Tingkat Satuan Pendidikan (KTSP).* Jakarta: Bumi Aksara.
[15] Widodo. (2017). *Metodologi Penelitian, Populer dan Praktis.* Jakarta: PT. Rajagrafindo Persada.