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INTERACTIVE MULTIMEDIA DEVELOPMENT USING AUTOPLAY MEDIA STUDIO 8 ABOUT DIVERSITY OF LIFE ORGANIZATION SYSTEM FOR VII GRADE STUDENTS OF JUNIOR HIGH SCHOOL

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Abstract

Learning media is one of the tools that teachers use to deliver material to students, so that they can be motivated in learning. Unfortunately, there are some teachers have not used interesting media in order to increase students interest. In this case, one of the effective media is by used interactive multimedia. Therefore, in this study the researcher try to develop the interactive multimedia by using *Auto play Media Studio 8* about the diversity of life organization system for VII grade students. The research subject consisted of three biology lecturers in UNP, two science teachers and 30 students in class VII of SMPN 31 Padang. Based on data analysis, the validity value of 80.81% (valid) is obtained, the practicality value of the teachers was 86.60% (practical) and the practicality value of students was 90.91% (efficient). The conclusion of this study was interactive multimedia was valid and functional to use.

Keywords: Autoplay Media Studio 8, Learning Media, Diversity of Life Organization System.

A. Introduction

The effectiveness of learning in schools can be marked by the level of student understanding of the concept of the material, so that knowledge gained can be applied in everyday life (Prihartini et al, 2015; Prasmala, 2019; Umairah, 2019). In fact, learning processed often experiences obstacles. This is supported by Prihartini et al (2015) which states the low quality and obstacles of Science subjects because of the limitation of Interesting and appropriate media in teaching and learning process. Therefore, teachers need the tools to facilitate students in understanding the material, such as learning media. Learning media is a tool used as a distributor of messages in learning so that effective and efficient learning occurs (Asyhar, 2012).

The results of a needs analysis conducted on 24 students at SMP Negeri 31 Padang in November 2014, revealed that 85% of students stated that diversity of life organization system was difficult to understand. In this context, material diversity of life organization system uses a lot of Latin terms, abstract images, and students do not understand the concept of cell-building, which starts from the cell to the organ system. Therefore, ninety per cent of students express the learning media used by teachers is not interested. Interesting learning media for students are media that are equipped with videos and animations (Prihartini et al, 2015). It means that in order to attract the students' motivation in learning, there are some interesting learning media/multimedia that can be equipped such as video, animation, sound, writing, and images.

Multimedia will be more interesting and more effective if there is a reciprocal relationship between the user and the multimedia called interactive multimedia. Interactive multimedia is

multimedia that is equipped with a controller that can be operated by the user so that users can choose what they want for the next process (Daryanto, 2010). Some of the advantages of multimedia in learning process are making it easier for students to learn individually or in groups, making it easier for teachers to deliver material, and certainly easier to increase student motivation (Kustandi & Bambang, 2011).

However, one of software that can be used to create interactive multimedia is Autoplay Media Studio 8. It is a multimedia software by integrating various types of media such as images, sound, video, text, and flash into learning presentations (Hernawati, 2010).The development of interactive multimedia using Autoplay Media Studio 8 has the advantage such as of make software faster, easy to script the languages, interactive objects, project templates, and multimedia capabilities (Idris et al., 2014). Meanwhile, the weakness of Autoplay Media Studio 8 in the development of interactive multimedia is the limited icon shapes. Therefore, based on the description above, the researcher was interested to conduct a study in developing interactive multimedia using Autoplay Media Studio 8 about the diversity of life organization systems in VII grade students of junior high school.

B. Literature Review

1. Learning Media

The media is a medium for conveying or mediating messages. This is in accordance with the opinion of Asyhar (2012) who revealed that learning media is everything that is useful for delivering messages from a source in a planned manner so that a conducive learning environment occurs. Thus, inappropriate learning media can reduce the ability of students to grasp the necessary material and inhibit the formation of students' personal competencies (Mulyasa, 2006). Therefore, the selection of learning media must be careful, thorough, and right on target in accordance with the conditions of the school environment.

2. Interactive Multimedia

Now, interactive multimedia is more effectively used in learning because multimedia is able to stimulate students through the senses of hearing and vision as well (Asyhar, 2012). Interactive multimedia is multimedia that has a reciprocal relationship between users and multimedia. One of the software that can be used to develop interactive multimedia is Autoplay Media Studio 8. This media has several advantages, such as 1) make software faster, 2) easy to script the languages, 3) Interactive objects, 4) Project templates, and 5) Multimedia capabilities (Idris et al., 2014)

C. Methodology

1. Research Design

This study was a research and development (Research and Development) conducted at the FMIPA UNP campus and SMPN 31 Padang, in September 2014-November 2015. The developed product was interactive multimedia using Autoplay Media Studio 8. The research subjects were VII grade students of SMP Negeri 31 Padang, three lecturers from the Department of Biology, Faculty of Mathematics and Natural Sciences, UNP and two teachers from SMP Negeri 31 Padang as validators. The material used is the diversity of life organization system. This development research procedure used 4-D models development model, which consisted of four stages, that are define, design, develop, and disseminate stages (Thiagarajan, 1974).

The first is defining stage; consist of initial final analysis, student analysis, task analysis, concept analysis, and formulation of learning objectives were carried out. The second is design stage, it is done by developing interactive multimedia. The third is developing stage; in this case, validity and practicality are carried out by experts. In this study was only carried out until the development stage because of the limited time and ability of researchers. Related to the practicality criteria on validation of practicality refer to Purwanto (2009).

2. Instruments

The research used primary data sourced from the questionnaire filled out by students and validators. Then, aspects considered for multimedia validation were material, language, and form of multimedia. Furthermore, the element measured for practicality testing was students' interest, usage process, students' activity, time, and evaluation.

3. The technique of Data Analysis

The analysis technique used was descriptive qualitative, data that describes the validity and practicality of interactive multimedia that was developed.

D. Findings and Discussion

1. Findings

Validation of interactive multimedia was carried out by five validator consisting of three lecturers from the Department of Biology, Faculty of Mathematics and Natural Sciences, UNP and two science teachers at SMP Negeri 31 Padang using a validity test questionnaire. The validity values of each component are: 1) the material used is 81.88% (valid), 2) the developed multimedia form is worth 80.56% (valid), and 3) the language used in developing multimedia is worth 80% (valid). Based on the validation results, it can be said that multimedia is valid for use with a percentage of 80.81% (Table 1).

However, based on the results of practicality, it is known that multimedia developed is efficient for students to use with an average of 90.91%. Description of the assessment of each practicality indicator that is multimedia can increase student learning interest by a percentage of 92.86% (efficient), easy to use for students with a value of 90.83% (efficient). The developed multimedia is useful in learning with a percentage of 91.67% (efficient), then the percentage of time and evaluation in the learning process is 91.67% (very practical) and 87.50% (practical).

Table 1. Resulted in Interactive Multimedia Validity Using Autoplay Media studio 8 on Material Diversity of life Organization System

NO	Indicator	Count	Validity Value	Criteria
1	Material	131	81.88 %	Valid
2	Form of multimedia	145	80.56 %	Valid
3	Language	48	80 %	Valid
	Count	324	242.43 %	
	Average	108	80.81 %	Valid

Table 2. Resulted of Interactive Multimedia Practicality Using Autoplay Media studio 8 on Material Diversity of life Organization System by Students

No	Indicator	Practicality Value	Criteria
1.	Student interest	92.86 %	Very practical
2.	Usage process	90.83 %	Very practical
3.	Increased student activity	91.67 %	Very practical
4.	Time	91.67 %	Very practical
5.	Evaluation	87.50 %	Practical
	Count	454.53%	
	Average	90.91 %	Very practical

2. Discussion

Based on data analysis from the interactive multimedia validity questionnaire, it is known that the interactive multimedia created has valid criteria with a validity value of 80.81%. This finding shows that interactive multimedia is feasible to be used by teachers and students in the learned process. Based on the aspect of interactive multimedia material/content, it is known that the validity data with a value of 81.88%, the criteria are valid. Multimedia that is made is appropriate to explain the content of learning in the nature of facts, concepts, principles, and procedures, as well as the material delivered to support learning objectives—making multimedia-based teaching materials, must be following the goals and objectives of learning and teaching materials (Asyhar, 2012).

Moreover, aspects of the form of multimedia, interactive multimedia are declared valid in terms of issues of multimedia form with a value of 80.56%. This shows that the background and colours used in the development of interactive multimedia were already interesting, animation in the delivery of learning material was appropriate, the display can respond to various stimulus of the students' five senses, images and videos used in accordance with student development,

sound and musical instruments according to the characteristics of students, the size of the letters used is clear and precise, and the type of letters used is clear and precise. Criteria for good multimedia teaching materials are the appearance must be attractive both in terms of image shapes and colour combinations used and in accordance with the characteristics of students (Asyhar, 2012). Furthermore, in aspects of language, interactive multimedia is declared valid with a value of 80%. This shows that the interactive multimedia that was developed already has a language that is in accordance with the level of student development, the language used is clear and appropriate, and the terms used are in accordance with the subject material. Narration or language in interactive multimedia must be clear and easily understood by students (Asyhar, 2012).

Practicality test conducted to teachers and students aims to determine the level of practicality of interactive multimedia that was developed. Judging from the aspects of students' interest show that interactive multimedia using Autoplay Media Studio 8 was very practical for students with a percentage of 92.86%. Therefore, it can be seen that interactive multimedia can attract students' interest in learning and motivate students to learn. In accordance with the opinion of Asyhar (2012) that learning media must be able to arouse student learning motivation. These interactive multimedia has an attractive appearance with a variety of background colours. This interactive multimedia is also equipped with images/animations that are easy to understand, and the language used is also easy to understand.

Judging from the aspect of the process of its use, it shows that interactive multimedia using Autoplay Media Studio 8 developed has practical criteria with a value of 81.25% by the teacher and is very practical by students (90.83%). This shows that interactive multimedia can make students comfortable to understand learning concepts. Besides, interactive multimedia is easy to use because no need to have special skills in using.

Judging from the aspect of increasing student activity, it is known that practical multimedia is used with a percentage of teachers at 87.50% and very practical by students with a practical value of 91.67%. This shows that interactive multimedia can train students to learn independently, because interactive multimedia is designed based on the user's comprehension and students can learn at any time. Also, interactive multimedia can also train students to think critically and make students better understand in understanding the material.

In terms of time, interactive multimedia using Autoplay Media Studio 8 is categorized as very practical with a value of 91.67% by students and usable by the teacher (87.50%). Interactive multimedia can be used by students repeatedly. They can be used outside of school because this interactive multimedia is stored in the form of flash and softcopy that can be used at any time. In addition, multimedia can optimize teacher's teaching time which can produce useful and focused learning for students (Uno & Nurdin, 2012).

Evaluation aspects, based on data from the results of practicality test analysis by the teacher, it is known that interactive multimedia viewed from the evaluation aspect has practical criteria with a practical value of 87.50%. The evaluation aspects are practical criteria with a value of 87.50% by students because the evaluation questions that are done are still in easy criteria, so students are not interested in the questions given. Evaluation is given to students aiming that students can measure their ability to understand the material.

E. Conclusion

Based on the results of the research that has been done, it can be concluded that interactive multimedia using Autoplay Media Studio 8 about the diversity of life organization system for VII grade students is valid and practical. The value of interactive multimedia validity obtained was 80.81% with valid criteria. The practicality score by the teacher is 86.61% with useful standards, while the practicality value by students is 90.91% with efficient criteria.

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