

Development of Interactive Multimedia in Integrated Thematic Learning by Using Macromedia Flash in Grade IV Elementary School

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ABSTRACT

This research is motivated by the lack of use of interactive, interesting and fun media for students, especially on technology-based media and during the learning process students have not been actively involved and are less involved in the process of using media. Technology-based learning media has not yet been developed because teachers only rely on theme books, MRT books, and other supporting books as sources as well as learning media, occasionally the teacher shows videos from YouTube. This study aims to determine the development of interactive multimedia in integrated thematic learning using Macromedia Flash in grade IV Elementary School in Padang City which is valid and practical. This type of research is Research and development (R&D). The development model used in this study is the ADDIE model with the Analysis stage, the Design stage, the Development stage, the Implementation stage and the Evaluation stage.

The results of the research developed, obtained the results of the validity level of learning media in integrated thematic learning with a total validation value of 86.4% in the very valid category. Furthermore, the results of practical trials of learning media in the form of interactive multimedia using Macromedia Flash in integrated thematic learning are stated to be very practical. This can be seen from the teacher's response and the student's response. Where the teacher response questionnaire scored 95% in the very practical category and 15 student response questionnaires scored 94.1% in the very practical category. Thus, the development of learning media in the form of interactive multimedia using Macromedia Flash in integrated thematic learning in grade IV Elementary School is very valid and very practical.

Keywords: Development, Interactive Multimedia, Macromedia Flash, ADDIE Model

1. INTRODUCTION

Education is a major milestone in the Industrial Revolution Era 4.0. In order not to be left behind and to be able to follow the development of existing science and technology, education must also experience changes for the better. This is supported by [1] which states that education, as one of the future investments, will not mean anything if it is not accompanied by continuous improvement, development, and learning innovation that will affect the inculcation of character values. and national culture.

The challenges of the 21st century, which are increasingly sophisticated, require that the curriculum be applied relevant to the current development of science and technology. In the industrial revolution 4.0 in the field of education in Indonesia, the Ministry of Education and Culture imposed a new curriculum, namely the 2013 curriculum [2].

The curriculum for 2013 is a set or system of plans and arrangements for content and materials that guide learning activities. The 2013 curriculum is a series of improvements to the previously initiated curriculum. [3]

The 2013 curriculum in learning uses an integrated thematic approach. Integrated thematic learning is an approach in which learning is combined with competencies from several subjects in various themes [1]

Syaifuddin [4] argues that thematic learning in learning focuses more on the involvement of students in the active learning process, so that students can gain direct experience and are trained to be able to find their own various knowledge they learn. Through direct experience, students will understand the concepts they are learning and relate them to other concepts they have understood.

In order to create ideal learning in accordance with the thematic learning objectives above, in planning learning, teachers must professionally design effective and meaningful (fun) learning, organize learning, choose appropriate learning methods, determine learning procedures, and set success criteria [5] .

In the learning process, communication between students and educators is allowed. With this communication process, learning media plays an important role as an intermediary. Without this media, the communication process between students and educators does not run optimally.

With the use of learning media, students can be more motivated in their curiosity so that learning feels more fun because students can be directly involved in the media they use. Learning media can help explain the difficulty of the material that will be delivered to students more simply so that it is easier for students to understand learning [6]

Interactive multimedia is one of the types of learning media. Interactive multimedia is media that combines text, graphics, audio, moving images or animated videos using links and tools to enable users to navigate, interact, create and communicate [7].

One example of interactive multimedia is Macromedia Flash. According to Setyono & Afri [8] Macromedia Flash is software that contains facilities for making designs and interactive media that are carried out professionally as well as matters relating to the facilities needed to compose content for multimedia.

Macromedia flash is a multimedia that can create videos, animations, images, and sounds in an easy and effective way. By using multimedia, abstract things can be concreted so that they can be displayed in front of students and attract interest in learning through various forms of animation that are presented [9].

Macromedia Flash has several advantages, including: (1) it can create animated logos, animations from multimedia presentations, games, interactive quizzes, simulations and visualizations,

(2) can create interactive buttons with a movie or other object, (3) can be converted and published in a variety of formats, including.swf,.html,.jpg,.png,.exe, and.mov.

The use of Macromedia Flash is very easy and has other advantages, including that Macromedia Flash can animate images well, be able to process out dynamic images and sounds, be

able to design for various media, and can add sound descriptions to an animation [10]. So it is very suitable for the development of learning media in an elementary school.

2. LITERATURE REVIEW

2.1 Learning Media

Learning media is anything that can be used to stimulate attention, feelings, thoughts, and ideas, abilities or skills of students so that they can encourage the learning process [11]. Learning media can be understood as anything that can convey or distribute messages from one source in a planned manner, so that a conducive learning environment occurs where the recipient can carry out the learning process effectively and efficiently [12].

According to Daryanto [13] the characteristics of learning multimedia are as follows:

- 1) Having more than one convergent media, for example combining audio and visual elements;
- 2) Interactive, in the sense of having the ability to accommodate user responses;
- 3) Independent, in the sense of providing convenience and completeness of content in such a way that users can use it without the guidance of others.

2.2 Interactive Multimedia

Multimedia is the use of computer technology in the manufacture of media that combines text, graphics, audio, moving images or animated videos using links and tools to enable users to navigate, interact, create and communicate [6]

Interactive is communication that occurs in two directions or more from the communication component [14]. According to Muntaha [15] interactive is something related to two-way communication, something that is mutually active, mutually active, and reciprocally related to one another.

In its use interactive multimedia has several advantages, according to Husen [16] the advantage of interactive multimedia is that it can be a facility for active student involvement in the learning process so as to increase the ability of students to understand concepts directly. Interactive multimedia can make the learning process more interesting, interactive, reduce the amount of teaching time, improve the quality of student learning and can be processed anytime and anywhere.

Interactive multimedia has many benefits, as for some of the benefits of interactive multimedia according to Sudjana and Rivai [20] (1) Learning will be more interesting and can foster student motivation; (2) Learning becomes more varied, not just verbal communication; and (3) Students do more learning activities (student centered); (4) Learning will be clearer in meaning, making it easy to reach and enabling students to master the learning objectives better.

2.3 Thematic Integrated Learning

Thematic learning is learning that is based on a theme that is used to link several subject concepts, so that children will more easily understand a concept, because it is only based on one theme for several lessons being taught [17]. Desyandri & Muhammadi [1] also argue that integrated thematic learning is learning that uses themes by linking several subjects so as to provide meaningful learning to students.

2.4 Macromedia Flash

The advantages of Macromedia Flash-based learning media are that they can present material in a complete and systematic way, so that it is easier for students to understand and allows students to master teaching objectives better [18] The advantages of Macromedia Flash are many, one of which is that it is easy to access, free to create, the resulting files are small, Macromedia Flash is still a new version, can be installed on all types of computers, and Macromedia Flash can be used by all educational institutions.

3. METHOD

This research is R&D development research which is a research method used to develop and produce a particular product . The ADDIE model, which consists of five stages, is used in this development research. These stages are the analyze stage, the design stage, the development stage, the implementation stage, and the evaluation stage[19]. The ADDIE development model was chosen because these five stages or steps are very simple when compared to other design models. It is simple and systematically structured, so this design model is easy to understand and apply and is suitable for developing development products such as multimedia, textbooks, learning videos, learning modules, and so on.

Analysis is needed to help the design process and analyze the various needs and limitations that exist in the field. This stage is the stage of data collection by conducting observations, distributing questionnaires and conducting field interviews. Observations or interviews were conducted to analyze and also collect information about the implementation of the curriculum in

schools, the needs of teachers, and also the needs of students. Then determine the appropriate learning strategy to overcome the existing problems. The results of the needs analysis are then processed to accommodate the various limitations that exist in the field for further action.

At the design stage, the researcher makes a plan which is carried out after getting the initial data from the results of the previous analysis. The design process focuses on selecting materials that are appropriate to the characteristics of students and the demands of competence, learning strategies, and evaluations. The development stage is an activity to create or develop learning media based on Macromedia Flash and then validate it. The finished product is then validated by linguists, media experts, and material experts. The purpose of the validation process is to improve learning media products based on Macromedia Flash so that they can be used in learning.

The implementation stage is the stage for implementing or implementing Macromedia Flash-based learning media that has gone through the validity and practicality test stages to determine its effect on the quality of effective, interesting, and efficient learning. The next stage is the evaluation stage, this stage is the final stage, namely evaluating to determine the quality and feasibility of media products that have been developed and applied. In this stage, a questionnaire is given to educators and students to see the response to the media.

4. RESULTS AND DISCUSSION

Table 1 Tabel of practical results of responses from teachers and students

Expert	Result Score
Material Expert	86%
Linguist Expert	88%
Media Expert	85,3%
Overall Average	86,4%

Based on the assessment of the experts, the validity of the experts got an overall score of 86.4% with a very valid category. These results state that the developed media is valid and can be used in the learning process, especially for the 7th theme, in 4th grade, in elementary school.

Table 2 Tabel of practical results of responses from teachers and students

Respondent	Score
Teacher	95%
Students	94,2%
Overall Average	94,6%

The practicality of the teacher's response to interactive multimedia-based learning media using Macromedia Flash in integrated thematic learning in grade IV elementary school obtained a percentage result of 95% with a very practical category, and the practicality of student responses obtained a percentage result of 94.2% with a very practical category. The overall result of the

average response of teachers and students obtained a value of 94.6% with a very practical category. The results of the practicality stated that the media developed were practical and could be used in the learning process, especially on theme 7.

From this data, it can be proven that learning using interactive media, especially macromedia flash, can make it easier for teachers to teach learning materials, make it easier for students to study materials, and make learning more active and fun. This is how the of learning media using macromedia flash looks.



Figure 1. Opening View

In this opening section, there is the title of the lesson to be studied and the start button to enter the main menu of learning media.



Figure 2. Main Page

In this main menu section, there are 9 menu displays to choose from, consisting of the core competencies, basic competencies, learning objectives, indicators, profiles, learning materials, instructions, quizzes, and puzzles.



Figure 3. Material Display

In this material section, students can see the material with an attractive appearance. In addition to learning the art of music (SBdP), students can play songs in the media. In this learning media, there are 3 lessons.



Figure 4. Puzzle Game Display

On the display of the puzzle game, there is a puzzle game that can sharpen students' brains and serve as a intermezzon when students finish studying. This puzzle related to the material being studied, namely diversity in Indonesia.



Figure 5. Quiz Display

A quiz, when done at the end of the lesson, has a feature that will respond. If the answer is correct, a check mark will appear, and if it is wrong, a cross will appear.

5. CONCLUSION

With the macromedia flash learning media, it is hoped that it can bring new innovations in learning and then increase the use of learning media, especially technology-based learning media and can help students better understand the material and can make learning more active and fun.

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