The Development Of Social Science Teaching Materials Based On Macromedia Flash In Improving Students' Learning Interest In Elementary Schools

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Abstract : *The social science learning implementation tends to use traditional or conventional approach still. It does not utilize teaching materials based on Macromedia Flash. The goal of social science learning is only focused on cognitive aspect and ignores social skills. It has not given maximum opportunity to students to develop their creativity so that the students are not maximally interesting in learning. Consequently, students feel bored in social science learning which results in low quality of school outcomes and low quality of education. The purpose of the research is to produce a valid, practical, and effective social science teaching materials based on Macromedia flash for elementary school students. This research was a research and development with some procedures. They were initial information collection, designing, development, dissemination, and implementation. The validity, practicality, and effectiveness of social science-based instructional materials products based on Macromedia flash and its devices were assessed. The subjects of field trials were teachers and the sixth-grade students of the elementary school in Parepare city. Data were analyzed using descriptive analysis. In general, the results of the study indicate that social science teaching materials the based on Macromedia flash and its device are valid, practical and effective. Specifically, there are some results of this research. First, needs of the social science material development based on Macromedia flash have passed six social science subjects? The subjects are earthquake disaster, tsunami disaster, flood, mountain natural disasters eruption, natural forest fire, and landslide disaster. The results of the validation of social science teaching materials based on Macromedia Flash and its devices are "very valid," and they are in accordance with the characteristics and needs of elementary school students. The response of teachers and students toward the social science teaching materials based on Macromedia flash is in the very good category. Moreover, the results of field testing to the target students showed that students' interest in learning by using social science teaching materials is in the very high category.*

Keywords - *Development, Instructional Materials, Social Studies, Macromedia Flash, Interest*

I.   Introduction

In the implementation of social science learning in primary schools, many problems are experienced by teachers, especially in an effort to improve the success of learning. The social science learning tends to still use conventional and traditional approaches such as lecturing, discussions, and assignments. In addition, the targets only emphasize on achievement on cognitive aspects and ignore social skills. Furthermore, it stated that in the social science learning process at all levels of school currently does not or has not given maximum opportunity to the students to develop their creativity, so that the students' learning interest toward the subjects is still lacking [1]. Consequently, students feel bored in social science learning, and it results in poor quality of school outcomes and low quality of education.

Based on various problems of social science learning implementation in elementary school, one of the alternative solutions is by using teaching materials that have the attractiveness, which can involve the whole sense of the students to learn. The effort to solve the problem of social science learning according to [2] is by using Macromedia Flash. He revealed that Macromedia Flash is a software animation that can be used to facilitate the delivery of a concept that is abstract in its application using computer image projector software. The ability to produce motion animations and sounds can be used such as software website site maker, and there are still many other advantages compared with other software animation [3]. It is added by [4] that using Macromedia flash will attract more students so that it can lead to student learning motivation.

Based on the above condition, it is argued that the teachers are expected to be able to design and develop various teaching materials by using multimedia-based Macromedia flash [5]. The goal is to create more meaningful, interactive, practical and fun learning for students. It is supported by [6] that the attractiveness of

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social science learning occurs when the material presented is packaged through various animations that affect student interest in learning.

The factual data in the field obtained through interviews with teachers in teaching and learning process show that the teaching materials used do not support the use of Macromedia Flash-based learning. Furthermore, the results of interviews with elementary students in Parepare show that the implementation of social science learning has not been interesting, which resulted in a lack of interest in learning. In addition, the achievement of the social science concept is not maximal.

Based on various indications of the meaning of the use of multimedia based on Macromedia Flash, this study intends to produce social science teaching materials based on Macromedia Flash which is packaged in the form of CD for learning purposes in elementary school students.

II.   Literature Review

2.1. The Basic Concepts of Macromedia Flash

Macromedia is an animation software learning media to help teachers in delivering lessons so that it can be more interesting and easy to understand. It is revealed that Macromedia flash is animation software which can be used to facilitate the delivery of a concept that is abstract in which its application use computer image projector software [2].

It is suggested by that [7] this program has many advantages compared with other animation software. Animation is an object-oriented program which is capable of designing a vector-based drawing. According to [7], this program can generate animated motion and sound by using software to create a website. The advantage possessed by Macromedia flash as audiovisual is that this program is capable of producing new actors that can be utilized in education [3].

Macromedia Flash can create simple to complex animation, through computer application program. It can combine images, sound, and video into the animation that is created. One of the benefits of using this medium can create a fun and practical learning condition. Furthermore, it effectively equips students' skills to use technology [8]. According to **Tabbers (2004)**, the use of Macromedia flash can generate a new reference or innovation (discovery) that can be utilized in education, especially the learning process.

2.2. Social Science Learning

Social science is one of the subjects taught at elementary school level. It is a subject in elementary school, where the material is sourced from various disciplines of social sciences and humanities. The material is simplified and organized and taught psychologically and pedagogically for education in primary school

(Muhammad Numan Soemantri, 2001).

Social science learning is often referred to various terms such as Social Studies, Social Education, Citizenship Education and Social Science Education. The limitations of social studies in Indonesia are educational programs that choose educational materials from the disciplines of social and humanitarian sciences. This learning is organized and presented scientifically and psychologically for educational purposes [9].

There are three purposes of learning social science for learners according to [10]. First, it is to prepare the basic knowledge and skills of students to be good citizens. Second, it is to train students to be able to think critically. Third, it is to make the students have the attitude to be able to continue the culture of the nation. Teachers are expected to design materials and learning strategies that involve students physically and emotionally, through the involvement of students in the learning process such as role-playing, observation, and other people's respect habits to achieve these objectives. The scenario of the learning program that is suitable for the achievement of these objectives is the Macromedia flash program.

2.3. Learning Interest

Learning interest consists of two words namely interest and learning. These two words have a different meaning, but they have a whole meaning when two words are merged into a compound word. It is said that "the interest is associated with the force that drives a person to confront or deal with people, objects, activities, experiences stimulated by the activity itself, and something joy [11]. It is also an indulgence or pleasure of something, anything or activity although anybody tells about that. Therefore, interest is a psychological aspect. In addition, positive attitudes toward learning have a big role in their relationship between feelings and interest [12].

It is clarified the formula of interest that is ' interest is persisting to pay attention to and enjoy same activities or contents.' It means that interest is the right tendency to pay attention and remember some activities [13]. Students who are interested in learning have a characteristic that is always focused [13]. They have a sense of fun and likes to something of interest (object). They gain pride and satisfaction on something of interest.

They also prefer something that interests them more than others. Based on these the interest characteristics, it is disclosed that there are some indicators of interest in learning, namely attention, interest, pleased and involvement [14].

III.   Research Methods

This study was a research and development [15]. This research was conducted to produce social teaching materials based on Macromedia Flash. The resulting product is social science teaching materials based on Macromedia flash which is packaged in the form of CD and supporting aspects such as student textbook, usage guide, lesson plan, and student worksheet. The product is assessed for validity, practicality, and effectiveness through testing of expert content and field testing for potential users.

The effort to produce social science teaching materials based on Macromedia flash was conducted by following the 4D model by [15]. It consists of four stages namely defining, designing, developing, and deploying. The final goal of the development study is to produce a valid, practical, and effective social science teaching materials based on Macromedia flash and its devices. There are some subjects of product testing namely the content of the subject and the learning design, teachers, and students. Field trials were conducted on elementary school students in Pare-pare. Data were collected using observation sheet, questionnaires, interviews, and learning interest test. The collected data were analyzed descriptively. Some criteria such as very good, good, fair, less, and not good was used as a basis for decision-making of the criteria. With such procedures, the researchers produce a valid, practical, and effective social science teaching materials based on Macromedia flash and its devices to be used in elementary school students.

IV.   Results

There are four research results presented below. The first is the description of the need for social science teaching materials based on Macromedia Flash. The second is the expert responses toward the social science teaching materials based on Macromedia flash and its devices. The third is the response of teachers and students toward social science teaching material based on Macromedia Flash. The fourth is the description of student's learning interest toward the implementation of social science teaching materials based on Macromedia Flash.

4.1. The Description of the Need for Social Science Teaching Materials Based on Macromedia Flash

Needs analysis activities were conducted with the aim of identifying the need for social science teaching material development based Macromedia flash. The data in this study were collected through three types of activities, namely: initial survey of social science learning implementation, interviews with teachers, subject guides, and decision-makers on the use of instructional media in primary schools. Additionally, data were also collected by analyzing curriculum content in determining the topics of social science subjects. By using these working procedures, authentic data about the development needs of social science teaching materials based on Macromedia flash for elementary school students are obtained.

Based on the initial survey of social science learning in three elementary schools in Parepare, it is found that teachers only teach their students by using lecturing method and grouping without using media. This condition indicates that most teachers do not use social science teaching materials based on Macromedia Flash. The results of the interview to the implementers of learning in the school informed that the use of media-based teaching materials in learning had been implemented at all levels of the class. However, Macromedia flash has not been used. By considering this situation, the researchers are trying to identify the content of social science teaching material through the study of the contents of the KTSP curriculum in 2006 and the curriculum 2013 as the basis of determining materials for the development of materials.

The results of identification show that in the second semester of class VI there are six basic materials for the development of teaching materials based on Macromedia Flash. The materials are fourth basic competence 4, such as the natural phenomenon in Indonesia and its countermeasures. There are six material descriptions of this basic competence. The first is earthquake disaster and its mitigation efforts. The second is tsunami disaster and its mitigation efforts. The third is natural flood disaster and its mitigation efforts. The fourth is natural disasters eruption and efforts to overcome them. The fifth is Indonesia natural forest fires and its mitigation efforts. The sixth is landslide disaster in Indonesia. These six basic materials are defined as the content of social science teaching materials for the development of teaching materials based on Macromedia flash in improving student learning interests and learning tools in primary schools.

4.2. The Result of Validity Testing of Social Science Materials Based on Macromedia Flash and Its Devices

Social science teaching materials based on Macromedia flash and its device has been produced. The tests of content and constructs are then assessed by the expert content of social science subjects, learning media

experts, and social science subject guides. The purpose is to assess the quality of teaching materials, and it can become suggestions for product improvement.

In the product validation process, the resulted teaching materials and the validation instrument using a scale of 1- 4 (very valid, valid, less valid, and invalid) are given to the experts simultaneously. Each item is declared valid if it is categorized as "valid or highly valid." The components of teaching materials based on Macromedia flash that are categorized as "invalid" are revised based on the suggestion of the assessors according to the notes on the prepared instrument column. The assessors provide an assessment of the suitability and eligibility of content, text, images, audio, animation, layout, letters, variations, conformity, and attractiveness and clarity. Based on the results of the assessment, it indicates that the average score of teaching material product based on Macromedia flash and its devices which have been produced is 3.93, and it is in the "very valid" category. If it is converted into the percentage, it is 98.52%. Therefore, this product meets the standards of the content and constructs, and it is appropriate to be used in targeted research. For the detail, the validity of the teaching materials can be seen in table 1 below.

Table 1. The Results of the Validity of the Developed Product

No	Components	Average of Assessment	Categories
1	Teaching materials based on macromedia flash	3.93	Very Valid
2	Teaching Materials of Students	3.95	Very Valid
3	Guidebook	3.92	Very Valid
4	Lesson Plan	3.94	Very Valid
5	Students' Worksheet	3.92	Very Valid
	Average	3.93	Very Valid

In table 1, the developed teaching materials based on Macromedia flash is categorized "very valid." Product assessment indications consist of content and construct, text, images, sound, video, animation, and layout of space, variations and attractiveness, suitability, and language. Each of these sub-aspects has fulfilled the eligibility criteria of content and constructs. Thus, social science teaching materials based on Macromedia flash meet the demands of quality content and constructs for learning needs of social science. It is suitable for the demands of the curriculum and targets for prospective users, especially for elementary school students.

4.3. Teacher and Student Response toward Teaching Materials Based on Macromedia

The social science teaching materials products based on Macromedia flash that have obtained expert approval are then the assessment for prospective users of elementary school teachers and elementary school students. The response of teachers and students of the teaching material products can be seen in table 2 below.

Table 2. Teachers and students response toward social science teaching materials based on Macromedia Flash

No	Components	Average of Assessment	Categories
1	Teachers' Response	3.600	Very Good
2	Students' Response	3.610	Very Good
	Average	3.605	Very Good

The table 2 indicates that teacher and student response toward teaching materials based on Macromedia flash are categorized "very good." The indication of the feasibility of the content is in accordance with the characteristics of teachers and students. It is easy to use, and it is according to the purpose and subject matter. Furthermore, the information conveyed is clear and easy to understand, and the quality of the display is good and interesting. Each of these indications meets the criteria so that it is worthy to be used on the research objectives in elementary school students.

4.4. The Description of Students Learning Interest Using Social Science Teaching Materials Based on Macromedia Flash-Based

The teaching materials that have been tested for validity and have received responses from teachers and students of the product are then experimentally tested to the target students. This test is to know the students learning interest before and after the use of social science teaching materials based on Macromedia Flash. The data of the students' interest were obtained by using questionnaire of interest in learning.

The findings of this study show that students' interest in using social science teaching materials based on Macromedia flash tends to be in "high" category. The students' interest in learning before the use of teaching materials based on Macromedia flash is categorized enough, and their interest after using Macromedia flash tends to be in the high category. It means that the use of teaching materials based on Macromedia flash can

increase students' interest in learning. Thus, the use of social science teaching materials based on Macromedia flash can improve the effectiveness of the implementation of social science learning in primary schools.

V.   Discussion

Discussion of the results of this study relates to the findings of validity testing and the findings of the implementation of the product. For the detail, the two components of the study are discussed as follows:

5.1. Validity of the Product

Five products are tested for validity, namely the validity of social science teaching materials based on Macromedia flash, student teaching materials, guidebook, lesson plans, and students' worksheet. The goal is to determine the validity of products developed by providing a qualitative and quantitative assessment of teaching materials prototype and its devices. The results of qualitative analysis of the components of each product indicate that the five products are in the "very valid" category and they have obtained approval from experts.

The process of determining the validity of the products is based on **Bagdonis & Salisbury's (1994)** view in which He stated that determining the validity of the product is conducted by requesting expert assessment about the developed product and it is one of the most widely applied ways in development research. Furthermore, **Brog and Gall (1996)** state that the results of the assessment by experts can be used as a basis to determine the validity of a product. Much other research has conducted this way in developing a product or model such as [16], [17].

The validity of the product development is performed by following the 4D model and combined with KTSP model (2006). The main idea of activities is to conduct needs analysis; designing; development of product prototype, validity testing, revision and refinement, field testing, and product finalization **(Muhaimin et al. 2009)**. According to **Marxt & Hacklin (2005)**, testing the validity of the product by following the steps that have been defined is something that must be achieved before being used in learning activities.

Testing the validity of the product is an essential part of development research, which is conducted after prototype of the development is completed. It aims at finding out whether the developed product meets the content of the product and whether is appropriate or not. Testing the validity of the product also intends to understand the extent to which the product has been developed to achieve the target. Product validity testing is intended to review product prototype and to provide suggestions for improvements as expected. The results of the validity test of the five products have met the standards both from the aspect of the content and also from the aspects of the construct.

Testing the validity is a product or model is considered to have validity if it meets five criteria. It is based on the purpose of research, it is satisfactory, it has available time in the implementation, it can increase interest, and it can change attitudes to be better. Based on criticism and suggestions for improvement, the five products meet the predetermined criteria. The teaching materials product is social science teaching material based on Macromedia flash for sixth-grade students of elementary school.

The developed teaching materials are conducted with the consideration that the social science teaching materials are a compulsory subject for every student, every school, and curriculum credentials. Therefore, it must be completed at every level of schooling, and it can be manipulated by teachers according to pedagogic needs to achieve the learning objectives.

The target of social science teaching materials based on Macromedia flash is to provide the stock of knowledge, skills, and attitudes as a result of learning. In order to realize behavioral changes in the verbal and abstract social science learning, using multimedia-based Macromedia flash need to be maximized. Social science learning with the study of teaching materials based on Macromedia flash can further optimize learning. Multimedia learning based on Macromedia flash can facilitate the understanding and the mastery of students to the subject matter.

Learning by using Macromedia flash program can combine various media (file format) in the form of text images, motion, sound, animation, video, interaction that has been packaged into a digital file used to deliver the message to the public and can be controlled by the user freely **(Ratini , 2011: 54)**. **Sovhan Vaughan (1994: 4)** reveals that multimedia is a variety of combinations of text, graphics, sound, animation, and video delivered using a computer or other electro-device.

Macromedia Flash is a vector -based program line and animation that is installed on the program so that the program becomes more interesting by using the program object images and text that can be animated so that it is like moving in the screen. It is revealed that Macromedia Flash is a software animation that can be used to facilitate the delivery of a concept that is abstract in its application using computer image projector software [2]. This program has several advantages if it is compared with other similar programs because it can create interactive buttons and create animated movements by following a predefined path.

Thus, the development of social science teaching materials based on Macromedia flash is implemented. It is expected that the social science teachers in all levels of the grade in the elementary school are expected to

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be able to develop teaching materials based on Macromedia Flash. It is conducted based on the fact that teachers, in general, cannot design, develop and use multimedia-based instructional materials based on Macromedia Flash.

Teaching materials using by teachers and students through textbooks are the only dimensionless knowledge that is not matched by the fulfillment of strategies to improve student learning interest. Based on this condition, teachers are expected to be able to design and develop a variety of teaching materials by using Macromedia Flash. The goal is to provide opportunities for the creation of more meaningful, effective, practical and interesting learning for students.

5.2. Implementation of Product Use

The last stage of the development of this learning material is the use of products that have been validated by experts. The goal is to know the practicality and effectiveness of the product used to target prospective users in school.

The results of field testing for prospective users indicate that the social science teaching materials based on Macromedia flash are easy for teachers and students. Furthermore, testing the product was conducted to the target students according to the criteria which meet the results of the development of teaching materials. Therefore, the teaching materials products are worthy to be used for research purposes.

The effectiveness of the product shows that teachers and students have an understanding as expected. For prospective users, the products that have been produced have provided convenience, acceptance, and positive response to the social science teaching materials based on Macromedia Flash.

Social science teaching materials based on Macromedia flash have proven in the field that the product is based on the need. The product is expected to be enabled to solve the problem of verbal and abstract social science learning. This finding agrees with the results studied by **Dholina Inang Pambudi (2015)**. He revealed that using Macromedia Flash multimedia is feasible to be used as a learning resource based on the results of the expert assessment, media specialists, and limited test. In line with that, **Trisnaningsih (2007)** conducted a study entitled "Development of Teaching Materials to Enhance the Understanding of Materials of Engineering Demography Course." The results showed that the use of teaching materials could improve the understanding of the demographic engineering subjects.

In some theories of learning media reveal that learning by using multimedia-based Macromedia flash can involve all the tools of the human. Multimedia-assisted learning can display text, graphics, static images, animations, movies and sounds **(William Ditto, 2006)**. **Francis M. Dwyer (1978)**, in his research, showed that in general, people could remember messages delivered through writing (10%), audio messages (10%), and visual (30%). If it is added by doing, it will reach 80%. Based on the results of this study, interactive multimedia can be said as a medium that has a very large potential in helping the learning process.

Multimedia is a variety of combinations of text, graphics, sound, animation, and video delivered using computers or other electro-devices [4]. An example of multimedia is moving images that are in sync with sound (modern television and movie broadcasts) [18]. It is suggested that there are some advantages of using Macromedia flash [19]. First, students can learn according to their abilities, readiness, and desires. It means that users themselves control the learning process. Second, students learn from a patient tutor (computer) that adapts to students' abilities. Third, students will be compelled to pursue knowledge and obtain immediate feedback. Fourth, the student faces an objective evaluation through his or her participation in the training or tests provided. Fifth, students enjoy privacy where they need not be ashamed of making mistakes. Sixth, learning is when the need arises ("just-in-time" learning). Seventh, the students learn whenever they want without bounding by the specified time. Thus, the use of multimedia in social science learning that is Macromedia Flash is the solution in the implementation of social science learning that is completely verbal. The presence of multimedia usage, particularly media-based Macromedia Flash in social science learning can involve all students' self-tools. Moreover, it can help students to learn more practical and more effective especially for elementary school students.

VI.   Conclusion

In general, the results of this research and development concluded that multimedia products based on Macromedia flash are valid, practical, and effective. It means that social science teaching materials based on Macromedia flash are "feasible" to be used in elementary school students. Specifically, there are five results of this study. First, there are some social science teaching materials based on Macromedia flash that need to be developed for elementary school students. The materials consist of the natural earthquake disaster, natural tsunami disaster, flood, volcanic natural disasters erupt, natural forest fire, and landslide disaster. These six basic materials set the content of teaching materials for the development of social science teaching materials based on Macromedia flash for elementary school students.

Second, the results of content testing show that social science teaching materials based on Macromedia

flash and its devices are "very valid" and it is in accordance with the characteristics and needs of elementary school students. Third, the response of teachers and students toward the use of social science teaching materials based on Macromedia flash is in the "very good" category. There are some indications of the feasibility of the content. It is in accordance with the characteristics of teachers and students. It facilitates the delivery of learning content. It is according to the characteristics of teachers and students. It is easy to use. It has appropriate goals and subject matter. The conveyed information is clearly and easily understood. The quality of the display is good and interesting, and it meets the criteria so that it is worthy to be used in elementary school students. Fourth, student learning interest is in the "very high" category. It shows that the use of social science teaching materials based on Macromedia flash is effective in improving students' interest in learning.

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