DEVELOPMENT OF INTERACTIVE MULTIMEDIA-BASED LEARNING MEDIA FOR SOCIAL STUDIES SUBJECTS AT SMP NEGERI 2 GENDING PROBOLINGGO

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ABSTRACT
This research aims to (1) develop interactive multimedia-based learning media in IPS class VII subjects at SMPN 2 Gending in the 2019/2020 school year, (2) to know the feasibility of interactive multimedia-based learning media in IPS class VII subjects in SMPN2 Gending in 2019/2020 school year. The research method used is research and development (R&D). This research adopted ADDIE development model with five stages namely; Analysis, Design, Development, Implementation, and Evaluation. The research subjects consisted of three experts namely; material experts, media experts, and social studies teachers. Data collection techniques using questionnaires and tests. Data were analyzed using descriptive analysis techniques. Based on the results of the study, it can be concluded that the feasibility of interactive multimedia-based learning media from the validation results of the material expert team, media and social studies teachers is good and student responses are very good. Thus, interactive multimedia-based learning media is feasible to be used as a learning medium for class VII students at SMPN 2 Gending.

Keywords: Learning Media, Social Sciences, Interactive Multimedia.

ABSTRAK

Kata Kunci: Media Pembelajaran, Ilmu Pengetahuan Sosial, Multimedia Interaktif
INTRODUCTION

The rapid development of science and technology (IPTEK) has affected many aspects of human life, one of which is education. The world of education is growing today, and various types of reforms are being carried out to improve the quality and quantity of education. Improving the quality of education requires various breakthroughs, both curriculum development, learning innovation, and the realization of educational infrastructure. Teachers must make learning more innovative to encourage students to learn optimally both in independent and classroom learning (Fatah and Sudiyanto 2018).

Many aspects, including teachers, and students, the availability of infrastructure, the use of diverse learning resources, the use of varied learning methods, and the use of exciting media influence the achievement of learning objectives. The advancement of the times with advanced techniques supports the use of diverse media in learning. Problems that often arise in education are the limited ability of teachers to work with the media, the limited infrastructure available in schools, and the limited availability of learning media (Aghni 2018).

The word media comes from the Latin medius, which means 'middle,' 'intermediary,' or 'introductory.' (Daryanto 2013) suggests that media, in Arabic, media is the intermediary or delivery of messages from the sender to the recipient of the message. Media means intermediary or introductory. Gagne (in Sardiman et al., 1993:1) states that media is a wide variety of components and their environment. It is also explained by Raharjo (1989:25) that media is a container of messages that the source wants to forward to the target or recipient of the message. The material received is an instructional message, while the goal achieved is the achievement of the learning process. The term "media" is often even associated or replaced with the word "technology," which comes from the Latin phrase tekne (English art) and logos (Indonesian" knowledge"). This is supported by Webster (1983:105), "art" is a skill acquired through experience, study, and observation. Thus, technology is just one science that discusses skills acquired through experience, analysis, and compliance. More specifically, the notion of media in teaching and learning is interpreted as graphic, photological, or electronic tools for capturing, processing, and reordering visual or verbal information. According to (Ali 2019), the process of making learning media is carried out through three stages: needs analysis, product development, one-on-one trials, small group trials, and final product implementation. Learn to describe the progressive change in one's behavior when reacting to the demands one's faces. Learning allows a person to satisfy attention or achieve goals. The success of vocational education cannot be separated from the role of learning media (Kosasih 2015), and the existence of learning media can be used to attract attention and make students active in the learning process, one of which is using interactive multimedia-based learning media.

Gayeski defines multimedia as "a collection of computer-based media and communication systems that have a role in building, storing, delivering and receiving information in the form of..."
text, graphics, audio, video, and so on.” In multimedia, there is the term interactive. The interactive sense, in this case, is related to two-way or more communication of the components of communication. "The communication component in interactive multimedia (computer-based) is the relationship between humans (as users or users of the product) and computers (software/applications/products in certain file formats, usually in the form of CD).” Products (CDs or applications) that are expected to have a bidirectional or reciprocal relationship between the software or application and its users (Kurniawan and Rachmawati 2018). From this presentation, it can be concluded that interactive multimedia is a medium in the form of text, images, graphics, sound, animation, video, interaction, and so on that have been packaged into digital files (computerized) intended to provide information to the public or users and can be packaged into a Compact Disk (CD) format. Because learning is basic information from teachers to students, interactive multimedia-based learning media occupies an essential position as one of the learning systems in social studies learning. Social studies are integrated subjects from history, geography, economics, and other social science subjects.

Social studies education at the school level can be interpreted as (1) Social studies education that emphasizes the growth of civic values, moral state ideology, and religion; (2) Social studies education that emphasizes the content and thinking methods of social scientists; (3) social studies education that emphasizes reflective inquiry. The primary purpose of social studies learning is to train responsible students as good citizens (Akbar Sa’dun 2011). In Law No. 20 of 2003 concerning the National Education System, it is explained that social studies are a study material that must be contained in the primary and secondary education curriculum which, among others, includes earth sciences, history, economics, health and so on which is intended to develop student's knowledge, understanding, and analytical skills on the social conditions of society.

Social Science is an integrated study material that is a simplification, adaptation, selection, and modification of the concepts and skills of the disciplines of history, geography, sociology, anthropology, and economics that are organized scientifically and psychologically for learning purposes (Endayani 2018). Learning supported by attractive media can arouse student interest and help achieve social learning goals at SMP Negeri 2 Gending. Unfortunately, there are still many teachers in the process of social studies learning that does not utilize various media that are important for teaching materials in the classroom. The most frequently used medium for teachers is LKS to deliver learning, which makes students bored following the learning process. This statement is based on preliminary observations at SMP Negeri 2 Gending.

The results of observations made at SMP Negeri 2 Gending, Gending District, Proboling Regency, East Java, on October 12, 2020, showed that there were obstacles in the implementation of the teaching and learning process, namely the need for more use of supporting learning media. No teachers use other media as a means of learning or learning media. Teachers still use books as learning resources and whiteboards as teaching media. Especially in social studies subjects on
Social Interaction material. As a result, students tend to be reluctant to follow the learning process and only become recipients of information from the teacher. Monotonous learning techniques using oral communication can be tedious for students. When teachers use conventional learning methods or lecture methods, students have fewer opportunities to communicate ideas and ideas and gain experience and potential in the learning process. The lack of computer technology in the learning process decreases students' motivation and interest in learning—limited teacher knowledge in developing interactive multimedia-based learning media as a teacher's media to deliver subject matter.

On the other hand, interactive multimedia-based learning media will create a different atmosphere that can change students' perceptions of social studies learning by using social interaction materials. Interactive multimedia can also positively impact educators because, with interactive multimedia, educators can develop learning techniques to improve their learning outcomes further (Widoyoko 2009). Using interactive multimedia-based learning media in the learning process will also shift boring learning into fun learning so that it can motivate students, attract attention, and actively involve students in the learning process. Interactive multimedia will also no longer make teachers the only learning resource for students because interactive multimedia provides opportunities for students to learn independently so that they can learn at any time. Therefore, this research seeks to develop interactive multimedia-based learning media in class VII social studies subjects at SMP Negeri 2 Gending and to determine the feasibility of interactive multimedia-based learning media in class VII social studies subjects. at SMP Negeri 2 Gending
METODE

The research was conducted at SMP Negeri 2 Gending. The implementation of research and development tests was carried out from November to January 2021. This research uses the research development (R&D) method. Development research aims to produce specific products that have been tested for effectiveness (Sugiyono 2009: 409). The product developed in this study is interactive multimedia that a team of experts has validated. The development model used in this study is the ADDIE development model, which consists of five stages, namely, Analysis, Design, Development, Implementation, and Evaluation. (Mollenda, 2008:107). This study adopted the ADDIE model's five steps: Analysis, Design, Development, Implementation, and Evaluation. The following is a picture of the research and development procedure consisting of 5 steps as follows:

Figure 1. Research and Development Procedure Analysis,

The analysis stage is a process of defining what will be learned by learning participants, namely conducting a needs assessment, identifying problems, and conducting task analysis. Therefore, the output we will produce is in the form of characteristics or profiles of prospective learners, identification of gaps, identification of needs, and detailed analysis of tasks based on needs (Pirgayanti 2015).

Design, At the planning stage of media development, it is formulated based on data obtained from the analysis stage. There are several things that researchers do, namely; 1) Determine learning materials that follow the 2013 curriculum, which includes the Core Competencies (KI), Basic Competencies (KD), indicators, and learning objectives in social interaction materials. 2) Create a flowchart, a development flowchart that provides a final picture of a view poured into the media script. 3) Create a Storyboard with a flowchart as a reference.
Figure 2. Flowchart Learning Media

Development, carried out to develop and produce learning media products. At this stage, several trials were carried out, namely: 1) Expert validation tests are carried out to assess learning media by filling out validation questionnaires and providing comments and suggestions. The expert validation results are used for improving learning media before being tested on students. After the validation process, the product is revised based on comments and suggestions from material experts, media experts, and social studies teachers to be exciting and follow the needs of students.

Implementation: After the revision, the implementation stage is carried out, where the activity is to conduct trials in the learning process. The product is tested by involving students of SMPN 2 Gending class VII. At this stage, there are two cycles, namely the tiny group trial stage and the large group trial stage.

Evaluation, In this evaluation stage, a final revision of the product developed based on the suggestions and input of students given during the implementation stage was produced in the form of an interactive multimedia-based Compact Disk (CD) using the Adobe flash application ready to use. This serves so that learning media can be implemented in the learning process and developed by the wider community (Asyhar 2011).

The subjects of product assessment for the validity of learning media consist of three experts: material experts, media, and social studies teachers. The sample from this study was class VII with a total of 33 students. Data was collected using media validity questionnaires and student...
response questionnaires. The data were analyzed using a scale of 5 (Likert scale). Data on the validation questionnaire of material experts, media, and teachers in the form of score data, from Eko Putro Widoyoko (2009: 238), to find out the quality of the product with the following description: Very Less (SK) is scored 1, Less (K) is scored 2, Good Enough (CB) is scored 3, Good (B) is scored 4, Excellent (SB) is scored 5. The five-scale conversion uses the conversion reference in the Benchmark Reference Approach (PAP), as shown in the table below:

<table>
<thead>
<tr>
<th>Quantitative data</th>
<th>Score</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Formula</td>
<td>Score average</td>
</tr>
<tr>
<td>5</td>
<td>$X &gt; \bar{X} + 1.8 Sbi$</td>
<td>$X &gt; 4.2$</td>
</tr>
<tr>
<td>4</td>
<td>$\bar{K} + 0.6 Sbi &lt; X \leq \bar{K} + 1.8 Sbi$</td>
<td>$3.4 &lt; X \leq 4.2$</td>
</tr>
<tr>
<td>3</td>
<td>$\bar{K} - 0.6 Sbi &lt; X \leq \bar{K} - 0.6 Sbi$</td>
<td>$2.6 &lt; X \leq 3.4$</td>
</tr>
<tr>
<td>2</td>
<td>$\bar{K} - 1.8 Sbi &lt; X \leq \bar{K} - 0.6 Sbi$</td>
<td>$1.8 &lt; X \leq 2.6$</td>
</tr>
<tr>
<td>1</td>
<td>$X \leq \bar{X} - 1.8 Sbi$</td>
<td>$X \leq 1.8$</td>
</tr>
</tbody>
</table>

RESULTS AND DISCUSSION

Needs analysis is necessary to determine the abilities or competencies that need to be learned by students to improve learning achievement. In this study, the researcher only focused on analyzing the social studies teaching needs of Social Interaction material, and the results of the analysis carried out were as follows: a) The delivery of learning materials using the lecture method makes students less active, so that students quickly experience saturation, be passive so that students rapidly experience saturation, be tolerant and result in reduced student attention in the teaching and learning process. So that in the end, it will have an impact on less than optimal learning outcomes, b) Respondents stated the need to use interactive media that can make it easier for students in the social studies learning process of Social Interaction material, c) According to respondents, the Social Interaction material needs to be well known, because the material is the primary material for students to take part in the subsequent learning. And the Social Interaction material is mostly writing and theory, so it needs interactive media that makes it easier for students to understand theory in a simple form.

Based on the results of the needs analysis above, the researcher designed a new learning media, namely: interactive multimedia packaged in the form of an interactive CD with the following specifications: (a) Attractive display, (b) Easy to use, (c) Can be used on low-specification computers, (d) Equipped with supporting software, (e) Material according to learning needs and easy to understand (equipped with simulations, animation, audio, video, as well as images). Interactive CD design considers to:

1. Users, this interactive CD is made to facilitate the learning process and increase students' interest and learning outcomes of SMP Negeri 2 Gending.
2. The output equipment, because interactive CDs will be used independently by students, a format that is compatible with the type of computer that will be used by students both at home and in computer rentals and internet cafes is needed.

3. Ideas accompany images of this interactive CD on the background and illustrations.

4. Audio The audio used on this interactive CD is a little because the sound may interfere with the concentration of learning. If audio is needed for refreshment, the student can use the audio contained on the computer used.

5. Animation is displayed according to the material discussed so that students can see moving illustrations of the material studied.

6. Video, where the student can press the play button to run the video.

7. Answer Form, the answer form is provided on the quiz menu in the learning media.

**Figure 3.**

**Figure 4.**

**Figure 5.**

**Figure 6.**

**Caption 3, 4, 5, 6:** Learning Media Display Starting From the Main Menu, Material Animations, Learning Videos, and Exercises.

The design, development, and implementation of learning media aimed at students of SMP Negeri 2 Gending are made in interactive CDs, made in the form of animations and simulations and done using Adobe Flash Cs6 and published into flash form and packaged in the form of CDs. This learning media is built as a CD aimed at making it easier for students to learn. In contrast, media in the form of CDs can be used not only in schools but also at home or even take advantage of public facilities such as internet cafes and computer rentals. In the design and development of this interactive CD, the following factors are of significant concern, namely: (1) the presentation
of information, (2) the usefulness of the media, (3) ease of use, (4) practicality. The material contained in the media is still limited to several sub-competencies that remain interrelated, so even though it only consists of a few sub-competencies, the media still has the value of knowledge needed to achieve learning objectives that follow the curriculum. The limitation of this material is due to time constraints in research. The material in the interactive CD consists of (1) Instructions for use, (2) General purpose, (3) Materials, (4) learning videos, (5) Quizzes.

Figure 7. 

Figure 8. 

Capture 7, 8: Cover View, and Learning CD.

After the display design and content of the interactive CD have been completed, the following action is to work on making the CD into a tangible form. Work on interactive CDs starts from choosing a background and placing buttons according to a predetermined design so that the interactive CD can be used as desired. After the product is completed. Material experts, media experts, and social studies teachers carry out validation (Maulidta and Sukartiningsih 2018).

At the development stage (development), researchers conduct validation tests. The results of material expert validation in developing interactive multimedia-based learning media products consist of social studies material experts. The products submitted to the material experts are in the form of learning aspects on interactive multimedia-based learning media material "social interaction" class VII. The assessment results from material experts are in the form of numbers with a total of 33. The average effect of the material validation score reached 4.0. Based on the intermediate results of material expert validation scores against interactive multimedia-based learning media, it can be concluded that it is perfect so that the product can be used without revision.

The results of media expert validation in developing interactive multimedia-based learning media products consist of one media expert. The product submitted to the design expertise is interactive multimedia-based learning media for class VII "social interaction" material. The assessment results from the design expert are in the form of numbers, with a score of 41 on the
display aspect and 29 on the programming aspect. The average result of the media validation score on the display aspect is 3.7, and on the programming aspect, 3.6. Based on the intermediate results of the validation score from the design expert on interactive multimedia-based learning media, it can be concluded that it is very valid so that the product can be used without revision.

The results of social studies teacher validation in developing interactive multimedia-based learning media products consist of one social studies teacher class VII SMP Negeri 2 Gending. The product handed over to social studies teachers is interactive multimedia-based learning media for class VII "social interaction" material. The assessment results from the teacher are in the form of a number with a score of 38. of the 10 indicators, and the average social studies teacher assessment result is 3.8 with a good category. Referring to the conversion table, the assessment of the content aspect is good. So, it can be concluded that the validation results of several teams of experts have been adjusted to the table. One value conversion. The trial was conducted at SMP Negeri 2 Gending in class VII with a sample of six students for a small group of 33 students and twenty-seven students for a large group of 33 students. The trial results were limited and the response questionnaire of class VII students after using interactive multimedia-based learning media. The average effect of the response questionnaire score of class VII students was 4.4 for small groups and large groups 4.6. Based on the average response questionnaire score obtained from class VII after using interactive multimedia-based learning media, it can be concluded that it is perfect so that the product can be used without revision. So, the results of small and large-group trials have been adjusted to Table1.1.

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CONCLUSION

Based on the validation results from media experts, the display aspect obtained an average of 3.7 with good categories, and the programming aspect received an average of 3.6 with suitable types. Material experts in the learning aspect got an average of 4.0 with excellent classes, social studies teachers in the content element obtained an average of 3.8 with good categories, and average student test results of 4.4 for small groups with excellent types. For large groups 4.6 with special classes, it was concluded that interactive learning multimedia developed is feasible and effectively used as a learning medium, especially in social studies subjects for Social Interaction material. Making interactive multimedia-based learning media can also improve teachers' skills in making learning more interesting for students. So that students are more interested in learning because they know in a more exciting way
BIBLIOGRAPHY


