Development of Audio-Visual Media in Learning Civics Education on Theme 'The Beauty of Diversity in My Country' In 4th Graders at SDN Antirogo 01 Jember

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Abstract: The purpose of this research is to describe the process and the result of the development audio-visual media. This is because audio-visual media has a very important role, particularly during online learning. This research uses Research and Development of Borg and Gall, contained of 8 stages; 1) preliminary research, 2) planning and development, 3) early product design development, 4) product design validation, 5) initial product revision, 6) use trials, 7) the revision of development products, and 8) the effectiveness of the products. The data analysis techniques used includes validation data analysis, data analysis of product of testing field result, and data analysis of products effectiveness. The result of the validation of the product was 94 which was in the category of very suitable to be tested using the product. After testing the use of the product, then the relative effectiveness test is carried out based on the average value of group A and group B to fourth grade students in SDN Antirogo 01 Jember. The result of the relative effectiveness test obtained are 43%, and is in the category of moderate level of effectiveness. It can be concluded that the new product developed has a moderate effectiveness rate compared to the old one.

Keywords: instructional media, research and development, audio-visual media developme

INTRODUCTION

Humans in the era of globalization as it is today are required to adjust the development of information technology, because it is inevitable that technology is a basic need. Munir (2009) states that information and communication technology is everything that supports, such as recording, storing, processing, retrieving, transmitting/delivering, and receiving information. The growing information technology also has an impact on the world of education, especially in the learning process. The educational objectives stated in Law no. 20 of 2003 concerning the National Education System, is that students can further develop their potential in creating humans who believe in God Almighty, have noble characters, knowledge, more capable, healthy, creative, independent, and become democratic citizens and become more responsible.

During this pandemic period, which has lasted for more than 1 year students were unable to do face-to-face learning, so they were only given assignments through the online system every day. Some schools implement an online system through *WhatsApp groups*, and there are also schools that implement an online system by utilizing online learning applications to support the teaching and learning process, such as *Google Classroom, Zoom, Google Meet,* and other similar applications. Learning with this online system, teachers are required to be able to provide more creative and innovative learning. Teachers can develop learning media so that the learning process becomes more interesting and fun, so that students can feel comfortable during the learning process. According to Arsyad (2016) dst, learning media is a tool used to convey messages in teaching and learning activities. Besides that learning media is also used to rearrange messages of visual or verbal information that

contains learning materials. Further, learning media can also be a determinant of success in the student learning process. In this sense, media in the learning process is not only a tool, but also a teacher and school environment that can act as a learning medium. The function of learning media according to Sumiharsono (2017) includes: 1) can clarify the content of the message to be conveyed so that not too many words are used; 2) the limitations of energy, senses, space, and time can be overcome; 3) can create direct interaction between students and learning resources, so that the passion for learning also increases; 4) Students become more independent according to the talents and abilities of each individual; and 5) are applied equally to all students, namely equating experiences, generating the same perception or understanding, and providing the same stimuli.

Based on observations during teaching practice at SDN Antirogo 01 Jember from August to September 2020, learning is only done through *WhatsApp groups*, sometimes teachers also provide videos assessed from *Youtube* via the *WhatsApp group* to students in order that students get the material first. However, the learning becomes less effective, because not all students understand the material they are studying. After conducting interviews with the fourth grade teacher, it was found that there were students who played an active role during the learning process, yet there were also students who did not participate in the learning process. This is because each student's learning style is different.

During online learning, the fourth grade teacher presented material using pictures and videos that contained a little explanation from the teacher on one of the subjects that made students feel difficult to understand. Therefore, these media are less effective in developing students' thinking skills. Based on the obstacles experienced in the learning

process, it makes learning less effective and efficient, so that students gained less material because the learning media presented are also less varied. Therefore, it is necessary to develop learning media through research with the title "Development of Audio Visual Media in Civics Learning with the Theme of the Beauty of Diversity in My Country in Fourth Grade at SDN Antirogo 01 Jember".

According to Sanjaya (2010) audio-visual media is a media that consists of sound and image elements that can be heard and seen. Examples of audio-visual learning media are television, slides, videos, films, and others. Arsyad (2016) also mentions that during the learning process, the development of learning media is always renewed by utilizing the results of technology. The audio-visual learning media that will be developed is in the form of learning videos with the theme of Indonesian cultural diversity. The material presented in this audio visual media discusses various regional dances in Indonesia. The material also showed an example of a regional dance which represented characteristics of the student's residence. This aims to increase students' insight and are expected to love and be able to preserve the culture in their respective regions and other regional cultures.

RESEARCH METHOD

This research uses research and development ($R\&D$). According to Borg and Gall (in Masyhud 2016), research and development is a process carried out to develop and validate an educational product by researchers. The product can be a learning approach, learning model, learning media, or a module. Research and development does not only result in the development of existing products, but also to produce an answer to the problems faced by innovative researchers.

This development research consists of 8 stages, which include: 1) preliminary research; 2) planning and development; 3) initial product design development; 4) product design validation; 5) initial product revision; 6) field testing of the product; 7) product development revision; and 8) testing the effectiveness of the product. The subjects in this development research were fourth grade students of SDN Antirogo 01 Jember who were divided into group A and group B. Data collection methods used in this study included observation, interviews, questionnaires, and documents.

The following data analysis techniques used in this development research were.
a. Data Analysis of Validation Results
    The formula used in finding validation results is:

$$Valpro = \frac{srt}{smt} \times 100$$

Description:
valpro = product validity
srt   = real score achieved
smt   = maximum score that can be achieved

After the score was changed using a scale of 100, then interpretation was carried out and concluded based on the classification criteria for the assessment of product quality in table 1 as follows.

Table 1 Criteria for Product Design Validation Results by Validators (Modification of Masyhud 2016)

Score Criteria	Product Feasibility Category
$x > 80$	Very Eligible
$60 < x \leq 80$	Eligible
$40 < x \leq 60$	Moderate
$20 < x \leq 40$	Fairly Eligible
$x \leq 20$	Very Poor

b. Data Analysis of the Results of the Trial of the Use of the Preliminary Design
    The trial of the use of audio-visual media was carried out using a questionnaire given to students. The questionnaire contains 10 question points with YES or No answer choices. After the questionnaires from all students have been collected, the next step is to analyze the data on students' answers using the following formula.

$$\textbf{Percentage points} = \frac{\textbf{number of YES answers}}{\textbf{number of students}} \times 100$$

The determination of the results of the initial design trial was obtained from the number of percentages of students' answers. If most students (at least 80%) give answers (YES) to each of the questions given, then the product that has been developed is declared eligible for further testing, namely the product effectiveness test.
c. Product Effectiveness Trial Data Analysis Product
    Trials in this study were conducted by dividing one class into two groups, namely Group A and Group B. Group A was given the old product, and Group B was given the new product. After each group was presented with learning products, then the two groups were measured using learning outcomes test questions. The test results are then tested for effectiveness whether the new product is more effective than the old product or not. Product effectiveness test is done by calculating the relative effectiveness test (ER) to determine the percentage level of effectiveness. The formula for finding relative effectiveness is as follows.

$$ER = \frac{MX_2 - MX_1}{\frac{MX_1 + MX_2}{2}} \times 100\%$$

Description:
ER = The relative effectiveness of an action compared to other actions
MX_1 = Mean or average value of group A
MX_2 = Mean or average value of group B

The results of the analysis of the relative effectiveness test were then interpreted and concluded based on the interpretation criteria of the relative effectiveness test in table 2 as follows.

Table 2 Interpretation Criteria for Relative Effectiveness Test (Masyhud 2016)

Results of Relative Effectiveness Test Effectiveness	Category
81% - 100%	Very high effectiveness
61% - 80%	High effectiveness
41% - 60%	Medium effectiveness
21% - 40%	Low effectiveness
0% - 20%	Very low effectiveness

RESULTS AND DISCUSSION

The following is a description of the results of research on the development of audio-visual media.
a. Data Analysis of Validation Results

Validator 1 provides an assessment with a total score of 69, and validator 2 provides an assessment with a total score of 73. The average score of the two validators is 71, so the validation results of the two validators are as follows.

$$Valpro = \frac{srt}{smt} \times 100$$

$$Valpro = \frac{71}{75} \times 100$$

Valpro = 94 (Very Feasible)

The product validity score that has been obtained is then converted into the product feasibility category as listed in table 1. The validity results achieved are with a score of 94.
b. Data Analysis of Preliminary Design Usage Trial
    Results The use

Trial aims to get an assessment from students on the product being developed. The results of the group B questionnaire show that aspect number 1 to aspect number 5 has a YES answer frequency of 100%, aspect number 6 has a YES answer frequency of 93%, aspect number 7 to aspect number 9 has a 100% YES answer frequency, and aspect number 10 has a YES answer frequency of 100%. the frequency of YES answers is 73%.

c. ProductTrial Data Analysis Product

Product effectiveness can be determined based on the average value of Group A and Group B. Group A has an average value of 61.33 and Group B has an average value of 95.33. The results of the relative effectiveness (ER) achieved are as follows.

$$ER = \frac{MX_2 - MX_1}{\frac{MX_1 + MX_2}{2}} \times 100\%$$

$$ER = \frac{95,33 - 61,33}{\frac{61,33 + 95,33}{2}} \times 100\%$$

$$ER = \frac{34}{78,33} \times 100\%$$

ER = 43% (Moderate Effectiveness)

The results of the calculation of the relative effectiveness test are 43%, the score is in the moderate effectiveness category, which is in the range of 41%-60%.

Development research conducted in this research is to develop a product in the form of audio-visual learning media. Learning media has an important role in the learning process, as stated by Sanaky (2013) that learning media can show objects that have limited space and time, can increase student interest in learning, and can create an interesting learning atmosphere and fun for students to achieve learning objectives. Further, it can also create more effective learning.

This accords with effectiveness of previous research results, on developmental research that had been carried out at various schools in Jember, including SDN Patrang, SDN Jember Lor, and SDN Kepatihan. Therefore, researchers carried out development research to schools that had not been given treatment, namely at SDN Antirogo 01 with the research subjects of fourth grade students who were divided into 2 groups, namely group A who was given learning to use the old product, and group B was given learning to use the new product. The product is in the form of a learning video with the theme of cultural diversity, namely about the typical regional dance of Jember City, Lahbako Dance as a learning medium.

The product being developed is tested for validity first to determine the level of product feasibility. This is in accordance with Sugiyono (2009) who stated that product validation is carried out with the aim of knowing the level of product feasibility both in the material aspect and in the media aspect. The results of the media expert validation got an average score of 69, and the material expert validation results got an average score of 73. Products that had been tested for validity, obtained a total average score of 94 and was in the very feasible category for field testing. Products that had been indicated feasible, then it can be tested for use as a medium in the learning process. The trial of using the product aims to assess how students respond in the learning process using audio-visual media. The trial was carried out in a small scale by giving the product first to group B students as material for learning, then students gave an assessment of the questionnaire containing a product assessment checklist. Based on the results of the questionnaire group B, aspects number 1 to as 5 have a 100% YES answer frequency, aspect number 6 has a YES answer frequency of 93%, aspect number 7 to aspect number 9 has a 100% YES answer frequency, and aspect number 10 has a YES answer frequency of 73%. The results of the small scale trial using the product showed that

the audio-visual learning media in the form of learning videos developed was considered good by students.

After testing the use of the product, then the product can be assessed for its effectiveness based on student learning outcomes. The learning outcomes of group A had an average of 61.33 and the learning outcomes of group B have an average of 95.33. In accordance with the results of the average value of the two groups, the effectiveness of the product is calculated using the relative effectiveness formula. The relative effectiveness results obtained are as much as 43%, which means that the new product developed has a moderate level of effectiveness compared to the old one. Thus, based on the research result the other 57% of student learning outcomes were influenced by other factors such as the surrounding environment, student motivation, students' talents and interests, the role of parents, as well as and learning difficulties. Some of these factors are in accordance with Sugihartono, et al (2007), who stated that the causes of learning difficulties are influenced by internal factors and external factors. Internal factors that cause learning difficulties include the ability to remember material, learning motivation, intellectual ability, self-confidence, and study habits. External factors that cause learning difficulties include the quality of learning, environmental factors, teachers, and learning facilities.

CONCLUSIONS AND RECOMMENDATIONS

This study discusses the process and results of developing audio-visual learning media which can be concluded as follows.

a. This research uses research and development (*R&D*). The type of research used is Borg and Gall development research which consists of 8 stages which include preliminary research, planning and development, initial product design development, product design validation, initial product revision, use trials, product development revisions, product effectiveness trials. The data analysis used in this research is data analysis from validation results, data analysis results from trials using the initial design, and data analysis of product effectiveness trials.

b. The product validation results scored 69 and 73, so the product had a validity level of 94 which was in the very worthy category for testing. This shows that the product developed is feasible for field testing. After the field testing was carried out, then the product developed was able to be assessed for its effectiveness test based on the average value. The average value of group A was 61.33, and the average value of group B was 95.33. Thus, the effectiveness of the product can be determined using the relative effectiveness (ER) formula. The results of the relative effectiveness test obtained are 43%, the score is in the moderate effectiveness category. It can be concluded that, the newly developed product has moderate effectiveness compared to the old one.

Based on the development research that carried out, the suggestions that can be given are as follows.

a. For teachers, it is hoped that this research can be a consideration in developing and improving the quality of innovative learning media so that students are more enthusiastic in learning.

b. For researchers, it is hoped that they can further increase their insight and creativity in developing learning media as teaching materials when teaching in elementary schools.

c. For other researchers, it is hoped that the results of this study can be used as a reference in developing similar learning media in further research with different topics, so that the learning process becomes more effective and makes students more motivated in learning.

THANK YOU NOTE

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