

Development of Audiovisual Media Based on Local Excellences of South Sumatra for Science Learning

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Abstract—This study aims to develop audiovisual media based on the local excellences of South Sumatra for science learning in elementary school. The method used were research and development methods. The Research and Development methods used adopted steps from the ASSURE learning media development model. The instruments used were questionnaires, interview guidelines and audiovisual media quality assessment sheets. The data were collected by descriptive. The result of this research were audiovisual media based on the local excellences of South Sumatra for science learning in elementary Grade IV Themes 4. berbagai pekerjaan subtheme 3. Pekerjaan Orang Tuaku. Feasibility test performed by professional team showed that audiovisual media based on local excellences was very feasible to applicate for science learning in elementary school.

Keywords—audiovisual media; local excellence; elementary science learning

I. INTRODUCTION

Science learning in elementary schools is taught through themes, students are expected to understand the material as interrelated units and according to everyday life. Thematic learning is a learning system that allows students, both individually and in groups. This thematic learning packages several material concepts from different subjects, with one particular theme that can present the meaning of various concepts of subject matter in an integrated [1].

Thematic learning in elementary schools must be accompanied by interesting and fun media. Learning media is one component that is very important in achieving learning goals. Learning media contains information and knowledge, generally used to make the learning process more effective and efficient. In addition, learning media can also make learning activities more interesting so that it can increase student learning motivation. In the process of learning and learning, learning media play a role in bridging the delivery process and sending messages and information from sources to the public [2]. Science learning in elementary schools, students need media that is close to their daily lives.

The media presented that is close to the daily life of students makes students interested for Science learning. This interest is what will cause a high curiosity towards science. This is in accordance with the study of science learning that discusses everything about objects and natural phenomena

obtained from investigation by finding out using the observation method, conduct experiments or experiments that can foster a scientific attitude. Meaningful science activities, which are relevant to children's daily lives, allow children to make connections between what they already know and what they are learning [3].

The results of the questionnaire distributed to elementary school teachers in Kota Palembang are known to be 78.57% of teachers who use the media in the learning process. The teacher who made the media alone only 35.71%. According to the teacher, the media that is available is still not in accordance with the demands of the curriculum. In addition, information was also obtained that the teacher had never linked IPA learning with the local excellences of South Sumatra, so that the content of local excellence is rarely loaded on learning. As a result, many students and even graduates who do not know much about the potential and culture of their own area.

The Local excellence is one of the potentials in each region that can be used as an interesting teaching material to be taught in schools [4]. According to Undang-undang RI No 20 of 2003 article 50 paragraph 5 which states that district/city governments manage basic and secondary education, as well as education units based on local excellence. Implementation of education based on local excellence will make students know the local excellence of the area where they live, able to process resources, involved in services or other activities related to local excellence, thus earning income while preserving culture, tradition, and resources that are regional excellence, and able to compete nationally and globally [5].

South Sumatra has various local excellence. The local excellence of South Sumatra province includes natural potential, cultural potential, artificial potential, historical potential, religious tourism, agro tourism, and culinary spread in 17 districts/cities in the province of South Sumatra. Natural potential is a local excellence most widely found in the province of South Sumatra. Various natural potentials in South Sumatra can be used as learning resources that have the potential for science in elementary and secondary schools [6]. The local excellence of South Sumatra can be used as teaching materials for science learning in elementary school [7].

Based on the background that has been disclosed, it is necessary to develop audiovisual media based on Local

Excellence in South Sumatra. The formulation of the problem are; 1) how is the development of audiovisual media based on local excellence in South Sumatra? 2) Is the audiovisual media produced suitable for use in science learning in elementary school? The objective achieved is the availability of audiovisual media based on South Sumatra Local Excellence for elementary science learning.

The benefits that can be achieved from the results of this study are; 1) expected to add insight and knowledge in order to realize better education for all parties. 2) For students to provide an ease in understanding the subject matter presented and provide meaningful experiences through an interesting and enjoyable learning process using audiovisual media based on local excellence in South Sumatra.

II. METHODS

This study uses the Research and Development method. Educational development research, namely a process used to develop and validate educational products, including products and processes, such as learning methods or learning media [8]. In this Research and Development research that will be carried out adopts and modifies the steps of the ASSURE learning media development model.

The research design used by the ASSURE model is adjusted to the stage of the research to be carried out. Heinich, et al. in proposed an effective media use planning model known as ASSURE [9]. The explanation is as follows:

A. Analyze Learners

A media plan is based on the needs of students, by analyzing student characteristics allows educators to plan learning according to the needs of students. Analysis of students is done using questionnaires and interviews with students and teachers.

B. State Objective

The second stage is determining the learning objectives to be achieved. The objectives to be achieved are tailored to the Core Competencies and Basic Competencies for Primary Schools as stated in the 2013 curriculum.

C. Select Methode, Media and Materials

The third stage in planning effective learning is choosing appropriate strategies, media and learning materials. In the development of South Sumatra's local excellences audiovisual media, learning methods were chosen in accordance with the 2013 curriculum demands, so that the learning process is not boring and can achieve the desired goals. At this stage an analysis of the elementary science learning syllabus is produced on the theme 4. *berbagai pekerjaan subtema 3. pekerjaan orang tuaku*.

D. Utilize Media and Materials

The fourth stage is designing audiovisual media based on local excellences in South Sumatra. At this stage the author begins to design, design, and create audiovisual media that can

be used in elementary science learning on the theme 4. *berbagai pekerjaan subtema 3. pekerjaan orang tuaku*.

E. Require Learner Participation

The next step is to prepare student participation. Good media must involve student activities, meaning that in the learning process students are required to be more active. The media that will be created must involve the learning nature of students as reflected in the activities carried out by students in the use of media during the learning process. At this stage the learning process is carried out by using audiovisual media based on the local superiority of South Sumatra at the SD Negeri 4 Palembang.

F. Evaluate and Revise

Evaluation of audiovisual media that has been made is assessed with a media quality assessment sheet. The media assessment was assessed by 2 validators consisting of 1 lecturer and 1 elementary teacher. While Revision aims to improve products that have been made. Product revisions are carried out based on criticism or suggestions from expert test results.

After the data is collected, the data is then analyzed. The analysis technique used is descriptive statistical analysis techniques. Descriptive statistical analysis techniques are statistics used to analyze data by describing or describing data that has been collected as it is without intending to make conclusions that apply to the general or generalization [10].

III. RESULTS AND DISCUSSION

The development of media based on local excellences in South Sumatra is prepared through development research with the ASSURE approach. This research develops media in the form of audiovisual media by containing the content of local excellences in South Sumatra for science learning in elementary school.

The first step is Analyze Learners. At this stage the data collected in the form of information is the initial knowledge of students about the local excellences of South Sumatra. This information was obtained by directly interviewing fourth grade 4 elementary school students in Palembang City. This was also strengthened from the results of interviews with teachers who taught at the elementary school that they had never made learning media that was associated with the local excellences of South Sumatra.

The next step is State Objective. At this stage is to determine the learning objectives to be achieved. The objectives to be achieved are tailored to the Core Competencies and Basic Competencies for Primary Schools as stated in the 2013 curriculum.

The fourth stage is designing audiovisual media based on local excellences in South Sumatra. At this stage the author begins to design, design, and create audiovisual media that can be used in elementary science learning on the theme 4. *berbagai pekerjaan subtema 3. pekerjaan orang tuaku*.

The results of the syllabus analysis at elementary school in grade IV researchers chose the theme 4. *berbagai pekerjaan subtema 3. pekerjaan orang tuaku*. The theme was determined

based on material considerations that made it possible to include the local excellences of South Sumatra. The results at this stage are presented in table 1.

TABLE 1. RESULTS OF THE SYLLABUS ANALYSIS

Learning 1							
No	Subjects	Basic competencies	Indicator	Local Excellence Content Analysis	Learning objectives	Learning process	Time
1.	Indonesian	3.5. Describe personal opinions about the contents of literary books (stories, fables and so on)	3.5.1 Determine the contents of the story in detail	Musi River and Belida Fish (The impact caused by the use of uncontrolled natural resources in daily life).	1. By reading the text of the Musi River, students can determine the contents of the story in exact detail. 2. By observing audiovisual media about the Musi River, students can inform the impact of uncontrolled human activities in everyday life appropriately. 3. By discussing with the group in observing audiovisual media about the Musi River, students can write examples of the effects of uncontrolled human activities in their daily lives properly	1. Students read the text of the Musi River reading carefully. 2. Students observe the important parts of information from reading carefully and thoroughly. (Observe). 3. Students and teachers ask questions about the reading text. (Ask). 4. Students are divided into several groups. 1 group consists of 5 people. 5. The teacher gives LKPD to each group. (Try) 6. The teacher displays audiovisual media. 7. Students listen to audiovisual media. (Observe). 8. Students answer LKPD. (Reasoning) 9. Group representatives come to the front of the class to communicate the results of the discussion. (Communicating)	2 x 35 minutes
	Science	3.8 Explain the importance of efforts to balance and preserve natural resources in their environment	3.8.1 Explain the impact of using uncontrolled natural resources in daily life.				
Learning 2							
No	Subjects	Basic competencies	Indicator	Local Excellence Content Analysis	Learning objectives	Learning process	Time
1.	Indonesian	3.5. Describe personal opinions about the contents of literary books (stories, fables and so on)	3.5.1 Explore information about the story orally in detail.	Musi River and Belida Fish (Efforts to maintain the balance of natural resources).	1. By reading the text of the Musi River Preservation Effort, students can determine the details of the story accurately. 2. By observing audiovisual media regarding Musi River pollution prevention efforts, students can find out how to maintain the balance of natural resources appropriately 3. By discussing with the group in observing audiovisual media, students can write down efforts to maintain the balance of natural resources appropriately.	1. Students read the reading text Carefully preserving the Musi River. 2. Students observe parts of important information from reading carefully and thoroughly. (Observe). 3. Students and teachers ask questions about the reading text. (Ask). 4. Students are divided into groups. 1 group consists of 5 people. 5. The teacher gives LKPD to each group. (Try). 6. The teacher displays audiovisual media. 7. Students listen to audiovisual media. (Listening) 8. Students answer LKPD. 9. Group representatives come to the front of the class to communicate the results of the discussion. (Communicating)	2 x 35 minutes
	Science	3.8 Explain the importance of efforts to balance and preserve natural resources in their environment	3.8.1 Citing examples of human activities as an effort to maintain the balance of natural resources				

Theme: 4. *Berbagai Pekerjaan*

Subthema: 3. *Pekerjaan Orang Tuaku*

The next step is to prepare student participation. Good media must involve student activities, meaning that in the

learning process students are required to be more active. The media that will be created must involve the learning science of

students as reflected in the activities carried out by students in the use of media during the learning process. At this stage the learning process is carried out by using audiovisual media based on the local excellence of South Sumatra at the SD Negeri 4 Palembang. The results of observations in the learning process of students look very interesting and enthusiastic when learning takes place. Students are active and ask questions about the material in the audiovisual media displayed.

The final stage is the evaluation of the learning process and results and making revisions. The resulting audiovisual media based on local excellence in South Sumatra was assessed by two validators consisting of elementary school lecturers and teachers. The results of the audiovisual media quality assessment based on the local excellence of South Sumatra are shown in table 2.

TABLE II. RESULTS OF QUALITY ASSESSMENT OF AUDIOVISUAL MEDIA BASED ON LOCAL EXCELLENCE IN SOUTH SUMATRA

No.	Evaluator	Average value	Category
1	Validator 1	89,26	Very good
2	Validator 2	91,6	Very good
Average		90,4	Very good

Based on table 1, the audiovisual media produced is very suitable for use in the learning process. This audiovisual media based on local excellence is made attractive so that it can increase students' learning motivation. This is in accordance with the purpose of using different and varied learning media which are proposed so that it stimulates students' interest and motivation to learn.

Feasibility assessment Audiovisual media based on local excellence encompasses 4 aspects: didactic, construction, technical and local excellence. Evaluation on each can be seen in the following figure 1.

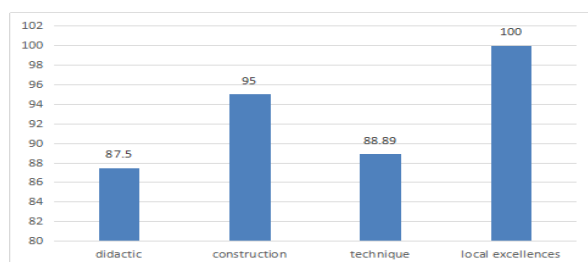


Fig. 1. Validator's assessment results in each aspect.

Based on figure 1, it shows that the results of the validator's assessment on the construction aspects and local excellence aspects have been very good category. This means that the media developed has fulfilled the construction requirements and the local excellence of the media. Construction requirements include the use of language and clarity of sentences in the media. Good aspects of construction in the media will make it easier for students to learn. Students explore and build knowledge based on the media provided by the teacher. This is consistent with Ausubel's statement that learning is meaningful only happens when students find their own knowledge. Because the learning process that creates

knowledge and experience of students is more meaningful and will last a long time in the minds of students, then it can be implemented [11].

In the aspect of local excellence, it is clearly seen that the content of local excellence is published in the media, including the rivers Musi, Ikan Belida and Kambang Iwak. The integration of the local environment is important. This is because; first the students' initial knowledge of subject matter in the form of local environments around the puppets is the initial knowledge brought about in learning. Second, learning materials that contain the potential of the local environment can improve students' understanding of their environment. Third, can increase students' love with the potential of their region. Fourth, to explain the concept described can use examples that are familiar with the student environment [9].

Assessment on the technical aspects is in a very good category. Technical aspects related to the completeness of images, information and harmony and display design. Learning media can clarify the presentation of messages and information so as to facilitate and improve the process of learning outcomes [12]. But there are some things that need to be improved, especially in displaying images in video that are too fast, the animation used is made smoother, including the use of color, type and font size.

IV. CONCLUSION

Based on the data collected, it can be concluded that the audiovisual media based on local excellences in South Sumatra which was developed has a quality that is very feasible to be used as a media for learning science in elementary schools. Suggestions for similar research, there are still many local excellences of South Sumatra that not many people know and can be used as learning material in schools so students learn more about the local excellences.

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