The Development of Digital Book Media Materials for Asean Countries Learning in Elementary School

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Abstract

This research is motivated by optimizing ASEAN material in sixth grade Elementary School in social studies learning through digital book media, the use of digital book media is used because of the lack of use of learning media during teaching and learning activities, then the use of media can provide interest and motivation to learn in students with a good display. interesting. The purpose of this study is to develop digital book media for ASEAN countries, and to find out the results of the feasibility of the media through experts, teacher users and sixth grade elementary school students. The method used in this research is the D&D method with the ADDIE research procedure. Based on the research results, there are validation assessments from various experts, including social studies material experts, media experts, and linguists. Based on the results of the assessment of material experts, media experts, and linguists, it can be concluded that the Digital Book Media of ASEAN Countries is in the "Very Feasible" interpretation based on the indicators contained in the validation of material experts, media experts, and linguists, namely the suitability of the material, accuracy material, material clarity, presentation support, learning presentation, digital book size, cover design, content design, readability, usability, straightforwardness, communicativeness, language suitability, and the use of terms to be used as media in social studies learning for sixth grade. Meanwhile, the results of the research on teacher and student users received a "Very Feasible" interpretation based on indicators for users including material suitability, material clarity, material usability, design, readability, language suitability, usability, ease of use, materials, media, and language. It can be concluded that this digital book media is very suitable to be used in social studies learning, especially on the material of ASEAN countries in sixth grade elementary school.

Keywords: D&D Research, ADDIE Procedure, Digital Book Media, ASEAN Countries

INTRODUCTION

Referring to Law no. 20 of 2003 concerning the National Education System article 1 paragraph (1) which contains the substance that it is a conscious effort and also through a planned process to create a learning condition and also the teaching process carried out by teachers or students so that they are active in learning, develop their potential along with religious spiritual strength, personality, ability to control themselves, noble character, and also the skills needed by themselves, the nation,
the state, and society at large. Education itself contains a variety of learning according to the level, one of which is social studies learning. According to Law Number 20 of 2003 concerning National Education, it is explained that social studies is one of the fields of education that is mandatory to be contained in the curriculum at the elementary to secondary levels. In this case, the social sciences include geoscience, economics, medical, history, and also the capabilities in the analysis carried out by students on the social conditions that exist in society.

Social studies learning especially in sixth grade Elementary School includes a lot of material, one of which is material for ASEAN countries regarding the history of the founding of ASEAN, getting to know ASEAN countries, and material on geographical characteristics in the ASEAN region based on books for sixth grade elementary school students (Kemendikbud, 2018). This ASEAN material is a material that must be studied by sixth grade elementary school students because by studying ASEAN material, students will form a good character of cooperation as is done by every country in several fields, then a character of love for the homeland is formed by always preserving various cultures, and wealth in Indonesia, but still have to respect other ASEAN countries, and can form a global thinking character that each ASEAN country has its own culture. Some of these characters can be formed if students can understand the ASEAN material well. One of the ways used to convey material is by using interesting media to be presented to students. The use of media, especially digital media, in the 21st century, education is becoming an increasingly important thing to make students who have learning and innovative skills, one of which is the skills to use information and technology media, survive using life skills and can work (Wahyuningsih, Y., Sundari, N., 2016).

Abidin (2018, p. 258) suggests that learning media is an interactive or active tool that can help teachers to grow student understanding. According to Asyhar (in Rahmadhon, Mukminin, A., & Muazza, 2021) the types of learning media are classified at least four types, namely visual, audio, audio-visual media and the last is multimedia. In terms of relation to learning media, there are several types, one of which is digital book media. According to Febrianti (2021), digital books are books in electronic form, in which there is multimedia such as visuals, audio, to allow interactive in the book. Meanwhile, according to Watin & Kustijono (2017) explained that digital books are books published in digital form, and displayed in the form of flipbooks.

Learning media used in learning cannot be separated from the TPACK component. TPACK is a frame that is able to combine several relationships between elements, namely technology, pedagogy and knowledge content (Spector et al., 2014). The role of the teacher in implementing TPACK is very important, because if one component is not fulfilled, it can affect other components (Akhwani, 2021). The link between digital book learning media and social studies learning in ASEAN countries aims to facilitate students in understanding ASEAN material in digital form and the application of varied learning methods, not only using the lecture method delivered by the teacher. In line with this, there are still many problems in learning, namely the teacher's lack of understanding of the use of learning media, as found in the research of Arigiyati, Kusumaningrum, and Kuncoro (2021) which states that there are still limitations in the application of learning media that uses technology as a basis, with the limited knowledge of teachers in creating an attractive learning media using mobile phones.

The digital book learning media developed is not only in the form of text as a whole, but there are videos, images, audio that can facilitate the various learning styles of students. Through observing pictures and reading texts, students can carry out the reasoning process, both inductively and deductively (Rostika, D., Windayana, H., Priatna, D., & Kartika, E., 2016). The making of digital book media is carried out based on several analyzes, one of which is based on the characteristics of sixth grade students, the characteristics of elementary school students, namely at the age of 7-12 years, the characteristics at that age according to Piaget (in Muri’ah and Wardan, 2020) including the stage of concrete operations that arise between the ages of 6-12 years, where at this stage the child already understands enough logic to understand the surrounding environment.

Development of digital book media based on research results due to the lack of use of digital media in schools, and the absence of training for teachers on digital. Thus, researchers developed digital book media for social studies learning in sixth grade. Education currently uses a lot of digital technology, one of which is the use of learning media. In designing this interactive learning media,
the researcher uses several supporting applications in making digital books, one of which is by using Flip PDF Professional and AppGeyser in making digital book applications, the design of making books is made using the Canva application. By using an application that can help writers to be creative in producing products in the form of interactive learning media.

Digital-based learning media are widely used today to support learning because using digital learning media learning activities will be more varied and more fun. Because the varied learning media can foster student motivation in learning and understanding the material provided. In this case, the author is interested in implementing a learning media using a digital book application which is named "ASEAN Countries Digital Book Application".

METHOD

The research method that will be used is the D&D (Design and Development) research method. Design and development research according to Richey & Klein (2007) is a systematic study of designing, developing, and evaluating to create a new product, tool or model or develop an existing one. Meanwhile, Rusdi (2019) stated that design research and development is an activity using knowledge to create and develop a product, both existing and non-existent. Design and development research is quantitative descriptive research. In the development phase it is more dominant in descriptive, while in the quantitative trial phase it is more dominant.

The purpose of this study is to produce digital book media material for ASEAN countries in sixth grade, the results of the feasibility test from experts, namely material experts, media experts, and language experts, and the results of teacher and student user responses to state material digital book media. ASEAN countries in sixth grade. The collection of data from the results of the feasibility test and user responses was carried out using questionnaires and interviews.

The subjects in this study were sixth grade students of SDN Sukahaji 02 totaling 10 people who still did not use learning media in the teaching and learning process, sixth grade teachers as users of the developed media, material experts were social studies lecturers who served as product validators in terms of social studies material. Media experts as validators in terms of media appearance, linguists as product validators in terms of language and writing.

The research procedure uses the ADDIE model. Where in this context ADDIE is applied as a reference for product design and development which refers to the stages of the ADDIE model according to Rusdi (2019) which consists of five stages, namely:

1. Stage of Analysis
   The analysis of the material and learning objectives is carried out by means of a literature study based on the applicable curriculum, namely the 2013 curriculum in sixth grade, Theme 1 Save Living Creatures, Sub-theme 1 Plants My Friends, Social Studies Learning about ASEAN Countries. This is done so that the media designed is in accordance with the material and learning objectives and the applicable curriculum.

2. Stage of Design
   The design stage consists of several stages, the first of which is related to the material that will be displayed in the digital book. The first step is to determine product specifications. After that, the material is determined according to the basic competencies in the curriculum packaged in the GBPM (Outline of Media Programs). And at the last stage, the researcher made a story board. Storyboard making is done to make it easier in the next stage, namely the development stage.

3. Stage of Development
   The development stage is carried out with the product manufacturing process. The product creation process includes material collection, multimedia collection, design creation, book creation in the form of PDF files, digital book creation using Flip Professional software, and application development using AppGeyser. The products that have been made are then assessed by material experts, media experts, linguists using a validated questionnaire instrument.

4. Stage of Implementation
   The implementation phase is carried out to determine the response from users, namely teachers and students of sixth grade SDN Sukahaji 02. This implementation phase is carried out directly.
Teachers and students were given directions to use digital book media and in filling out questionnaires. Questionnaires are used to determine responses from users as well as suggestions and input from respondents.

5. Stage of Evaluation

The evaluation stage is carried out to improve the media obtained from the results of the respondent's questionnaire that has been given to teachers and students. This improvement process is carried out with the hope that the media created can be properly feasible and useful in the learning process.

This data collection was carried out using a questionnaire with a Likert scale, namely a scale in the form of a score of 1-4. The Likert scale is a scale that is widely used to measure a person's perception, opinion or attitude in an event or social phenomenon according to Bahrunt, Alifah, & Mulyono (in Pranatawijaya, et al, 2019). The way of data analysis is by calculating the results of the questionnaire into percentage form. The scores that have been obtained from each question are summed and averaged and then converted into percentage form using the following formula:

$$Ps = \frac{S}{N} \times 100\%$$

Information:
Ps = Percentage
S = Total Score
N = Total Score Ideal

The results of these calculations are converted into descriptive form by referring to the score interpretation criteria according to Riduwan (2016).

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Interpretation Criteria</th>
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<tbody>
<tr>
<td>0-20%</td>
<td>Not Feasible</td>
</tr>
<tr>
<td>21%-40%</td>
<td>Poor</td>
</tr>
<tr>
<td>41%-60%</td>
<td>Fair</td>
</tr>
<tr>
<td>61%-80%</td>
<td>Feasible</td>
</tr>
<tr>
<td>81%-100%</td>
<td>Very feasible</td>
</tr>
</tbody>
</table>

RESULT AND DISCUSSION

In the research method section, it has been explained that this research develops digital book media for ASEAN countries in social studies learning in sixth grade elementary school using the ADDIE model.

1. Analysis (Analysis)

At the initial stage, namely analyzing starting from the needs of learning media, the characteristics of students, materials and learning objectives. The need for learning media is very much needed by teachers and students at SDN Sukahaji 02. In the digital era like today, learning media can be developed in various forms, through the use of digital media it can make it interesting by attaching illustrations in the form of images, videos and audio that can be used to facilitate student understanding.

Based on this, the researchers developed learning media in the form of digital books, digital books are one of the uses of technological developments, by including multimedia in the form of videos, images, and audio, so that they become alternative media that can be used by teachers to convey material to students by choosing the type of media. digital media that already exist in digital books developed by the author.

Characteristics of sixth grade elementary school students at the age of 7-12 years, the characteristics at that age according to Piaget (in Muri’ah and Wardan, 2020) are included in the concrete operational stage that appears between the ages of 6-12 years which at this stage the child already understands enough logic to understand the environment.
The preparation of the material is carried out in accordance with the needs of students and pays attention to the basic competencies used in sixth grade Elementary School of Social Sciences (IPS) regarding ASEAN Countries contained in the book theme 1 "Save Living Creatures". With KD 3.1 Identify geographical characteristics and socio-cultural, economic, political life in the ASEAN region.

After the analysis process has been completed, the researcher performs the design stage. At the design stage, product specifications are made and the design of the Media Program Outline (GBPM) is carried out. GBPM is made based on the analysis of needs, materials and objectives that have previously been carried out (Susilana, R & Riyana, C, 2008). The GBPM made aims to be a reference in the design process.

2. Design
The design stage for learning media products for digital books for ASEAN countries. At the development stage, namely collecting material. At this stage the researcher adjusts it to the analysis stage. The material presented is about ASEAN Countries, the material consists of the history of the founding of ASEAN, the founding figures of ASEAN, the meaning and significance of the ASEAN symbol, the geographical location and icons of ASEAN countries, the socio-cultural, economic, and political life of each ASEAN country, and the characteristics of students while studying the material of ASEAN Countries. Materials need to be sorted by taking into account the interrelationships between materials, and one material will be a prerequisite for understanding other materials (Kustandi & Darmawan, 2020). Then the researchers conducted a multimedia collection that aims to provide added value to the digital book. The use of multimedia can improve student learning outcomes (Coring, F, B, 2019). The use of multimedia in digital books consists of images, videos, audio, and access links. At this stage the researcher determines the product specifications, then determines the material that is in accordance with the basic competencies in the form of GBPM (Outline of Media Programs) and makes a story board. The use of learning media can make it easier for students to understand the material presented (Abi Hamid, M., et al, 2020).

3. Development
Development is an activity which in this case is carried out with directed, conscious conditions, and has also gone through planning to create and make improvements to a product, so that in this way it will become a product that has use value to increase quality in order to make a better product (Ohy, M, et al, 2021). Development is made based on the analysis that has been done. The digital book was developed for social studies learning media for sixth grade. These stages include the product creation stage, expert validation, and product revision. Products that have been made are then validated by material experts, linguists and media experts. This ASEAN Countries Digital Book Media is made based on product specifications, Media Program Outlines (GBPM), and display layout designs at the design stage (Design). The process of making this digital book media uses several tools including Microsoft word, Canva, FilmoraGo, Flip PDF Professional, and AppGeyser. The process of making digital books begins with collecting materials and multimedia, making books in PDF form. After the media is complete, the next step is to test the media to determine the level of feasibility for use on teachers and students, expert validation consists of material experts, media experts, and language experts, the results are as follows.

The feasibility of the developed digital book media is based on the percentage of validation results from material experts, media experts, and linguists. Development research on aspects of learning needs to involve experts in learning (Rusdi, 2019). Several aspects were validated by material experts, namely aspects of content feasibility and presentation feasibility. The results of the material expert validation got a score of 92.8%, the material expert validation questionnaire consisted of 14 questions. Based on this, the results of the material expert validation show that the material for ASEAN countries presented in the digital book is very well used in social studies learning in sixth grade elementary school. Based on the eligibility
interpretation criteria according to (Riduwan, 2016) Digital Book Media of ASEAN Countries based on IPS material has the interpretation criteria of "Very Feasible".

Based on the aspect of media expert validation which consists of aspects of graphic feasibility and technical quality. The results of the media expert validation got a score of 100%, the media expert validation questionnaire consisted of 22 questions. Based on this, the feasibility of graphics and technical quality in digital books is very good and can support the material presented. Through learning media that are presented in accordance with the material, they can achieve better learning outcomes (Suryadi, 2020). Based on the aspect of eligibility interpretation criteria, the Digital Book Media of ASEAN Countries has the interpretation criteria of "Very Feasible".

Based on the validation aspect of linguists which consists of aspects of language suitability. The results of the validation of linguists got a score of 94.4%, the linguist validation questionnaire consisted of 9 questions. Based on this, the language suitability is adapted to the characteristics of the sixth-grade elementary school students. Language becomes a tool to convey material so that learning achieves a goal to be achieved (Wicaksono, L, 2016).

Material expert validation is an expert in the field of social studies in elementary school, he is one of the lecturers for social studies courses in the UPI Elementary School Teacher Education Study Program, Cibiru Campus. While the validation of the media expert is one of the fine arts lecturers in the UPI Elementary School Teacher Education Study Program, Cibiru Campus who understands the design and layout of a product in the media. Validation linguists are Indonesian language lecturers at the UPI Elementary School Teacher Education study program, Cibiru Campus. Based on these data, there are recapitulation results from material experts, media experts, and linguists which are presented in Table 2 as follows.

<table>
<thead>
<tr>
<th>Validator</th>
<th>Assessment Result (%)</th>
<th>Category</th>
</tr>
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<tbody>
<tr>
<td>Material Expert</td>
<td>92,8</td>
<td>Very feasible</td>
</tr>
<tr>
<td>Media Expert</td>
<td>100</td>
<td>Very feasible</td>
</tr>
<tr>
<td>Linguist</td>
<td>94,4</td>
<td>Very feasible</td>
</tr>
<tr>
<td>Average</td>
<td>95,7</td>
<td>Very feasible</td>
</tr>
</tbody>
</table>

Based on the results of the recapitulation of the assessment of material experts, media experts, and linguists, it can be concluded that the Digital Book Media of ASEAN Countries is in the "Very Feasible" category based on the indicators contained in the validation of material experts, media experts, and linguists, namely the suitability of the material, material accuracy, material clarity, presentation support, learning presentation, digital book size, cover design, content design, readability, usability, straightforwardness, communicativeness, language suitability, and the use of terms to be used as media in social studies learning for sixth grade elementary school.

4. Implementation

This implementation stage is carried out directly on teachers and students of sixth grade SDN Sukahaji 02. Teachers and students test based on learning using the flipped classroom learning model, namely by giving digital books to students the previous day, learning begins with opening prayer together and do ice breaking using guessing pictures to add motivation to learn, followed by apperception and delivery of learning objectives.

Then, the implementation of core activities that begins with observing digital books, and continues with making groups. After that, group activities by filling out LKPD and discussing the results of student discussions, and closing with the delivery of conclusions and benefits of learning, then filling out individual evaluation sheets, then providing follow-up and praying together to close the lesson. After that, the use of digital book media to fill out response
questionnaires and open interviews. The responses of teachers and students are described as follows.

The responses of teacher users and students are digital book media material from ASEAN countries based on the results of filling out teacher questionnaires which have 96% results in the “very feasible” category. While the results of the responses of students with a total of 10 people were accumulated to 97.9% in the "very feasible" category.

The stage of media refinement from the point of view of the end user. Based on the questionnaire responses from teachers and students, students at the time of filling out the questionnaire did not provide input and suggestions for the developed ASEAN Countries Digital Book Media, but only stated that the use of the media used quotas and there were several student cellphones that were not supported at the time. access digital books. While input and suggestions from teacher users only provide positive input on digital books developed by researchers. Researchers develop access to the use of digital books in online and offline forms to make it easier for users.

One aspect of evaluating the media includes the content of the material and language (Safitri, D., & Hartati, T, 2016). Through these aspects, the achievement of the research carried out is very good. The results of the accumulated teacher user responses have a score of 96%, the teacher user response questionnaire consists of 19 questions. The results of user responses based on interpretation criteria are in the "Very Feasible" category.

In addition to the user response questionnaire, the researcher gave interview questions which resulted in the teacher delivering ASEAN material by using various methods and varied media. The difficulty faced by teachers in delivering ASEAN material is that it is difficult to distinguish the characteristics of ASEAN countries. The details that teachers know about ASEAN countries include the number of ASEAN countries, the structure of the country, and the socio-cultural life of ASEAN countries. Teachers use learning media when ASEAN materials use atlas, globes, cellphones to search on google, and textbooks. Then the teacher has used digital media, namely cellphones to find information through Google. Teachers also have difficulty when using media, especially cellphones because there are students whose cellphones cannot support when learning. The sixth-grade teacher at SDN Sukahaji 02 has never attended any digital training or about digital books. According to the sixth-grade teacher, the media that the researcher developed was very effective in supporting social studies learning material for ASEAN countries.

In addition to teacher users, there are student user responses consisting of 10 students. an evaluation in small groups involving nine children to twenty children (Riduwan, 2019). Aspects contained in the student response questionnaire include material aspects, media aspects, and language aspects. The results of the accumulation of 10 students resulted in a score of 97.9%, which consisted of 12 questions. These results indicate that the interpretation criteria are in the "Very Feasible" category.

CONCLUSIONS
The results of the research on the development of digital book media for ASEAN countries learning social studies sixth grade that have been carried out by researchers, the conclusions produced are as follows:
1. The development of digital book media begins with the analysis stage which aims to ensure that digital book media products are designed in accordance with the needs of learning media, student characteristics, learning materials and objectives. Next, the design stage is carried out by making product specifications, making GBPM (Outline of Media Programs), and making storyboards. Next, the development stage is carried out by making digital book media products.
2. The media feasibility test begins with creating a design using Canva to form a PDF file, after that the PDF file is entered in the Flip PDF Professional application to be formed into a digital book and in the last stage it is made into an application using AppsGeyser. After the digital book application is formed, the next stage is to validate it with material experts, media experts, and
linguists to determine the feasibility of the media that has been developed. The recapitulation produced by material experts, media experts, and linguists got a percentage score with an average of 95.7%, the results were in the category of "very feasible" interpretation. Based on this, the Digital Book Media of ASEAN Countries is very suitable to be used for social studies learning for sixth grade.

3. The response of teachers and students aims to determine the usefulness and understanding of the material through the media developed by the researcher. This stage is carried out after the revision process that was previously given by material experts and linguists. This stage was carried out at SDN Sukahaji 02 to find out the response and test the media to teacher users and 10 students of sixth grade. The results of the teacher user responses got a percentage score with an average of 96% and the results of the recapitulation of 10 students got a percentage score with an average of 97.9%. The data shows that the responses of teachers and students get the interpretation category of "Very feasible".

REFERENCES


