

DEVELOPMENT OF THE ASEAN ENCYCLOPEDIA MEDIA TO IMPROVE STUDENTS' LEARNING OUTCOMES IN CLASS VI SOCIAL STUDIES LEARNING

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Abstract

Based on the results of interviews with teachers, results of daily tests, and questionnaires, there are problems in ASEAN learning. Many students get grades that do not reach the KKM during daily and semester tests. Based on these problems, the researchers developed a learning media in the form of an encyclopedia. This study aims to develop the ASEAN encyclopedia media and determine the effectiveness of the ASEAN encyclopedia media in social studies learning for sixth grade elementary school students. The method used in this research is R&D with ADDIE model. The ADDIE model is carried out in five steps, namely analysis, design, development, implementation, and evaluation. The research subjects were the sixth grade students of SDN Grogol Selatan 05, SDN Grogol Selatan 08, and SDN Grogol Utara 05 were 179 students. The technique used to determine the sample in the study is purposive sampling then the data collected is analyzed descriptively qualitatively for interview data and quantitative descriptive for test data and questionnaires. To test the effectiveness, paired t-test was used to determine Hypothesis Ho: there is no difference in learning outcomes before and after the use of the ASEAN encyclopedia, Ha: there is a difference in learning outcomes before and after the use of the ASEAN encyclopedia and the t-test criteria $t_{count} < t_{table}$ shows a significant difference between the initial variable with the final variable. $t_{count} > t_{table}$ shows that there is no significant difference between the initial variable and the final variable. The results of the feasibility test for language materials experts are 4.71 categorized as very feasible, the language validation questionnaire with an average rating of 4.67 is categorized as very feasible, the design and media validation questionnaire with an average rating of 4.83, the teacher's response test with an average value 4.5 which is categorized as very decent. The ASEAN encyclopedia learning media was tested one to one at SDN Grogol Selatan 05, SDN Grogol Selatan 08, Grogol Utara 05 with an average score of 4.58 which was declared very feasible, small group trials with an average score of 4.4 and large group trial obtained an average value of 4.5 which is categorized as very feasible. The results of the effectiveness test of the t arithmetic value are smaller than t table ($-8.4054 < -1.9697$) with 244 dk and an error rate of 5% so that Ho is rejected and Ha is accepted. So that there is a significant difference between the value of student learning outcomes before and after using the developed ASEAN encyclopedia media.

Keywords: ASEAN Encyclopedia Learning Media Development, ADDIE Model, Learning Outcomes

3 INTRODUCTION

According to Law No. 20 of 2003 education in Indonesia is carried out based on the 2013 curriculum which began to be implemented in the 2013/2014 school year. The 2013 curriculum wants students to have soft skills and hard skills consisting of attitudes, skills, and knowledge competencies so that they become creative, innovative, and characterized students. This is in accordance with the statement of Ahmad Yani and Mamat Ruhimat (2018: 42) that the skills that must be mastered by students are divided into two, namely hard skills and soft skills.

The 2013 curriculum is applied in the learning process in schools. Learning according to Gestalt in A.Rusdiana & Yeti Heryati (2015:146) is a teacher's effort to provide learning materials in such a way that it is easier for students to organize (organize) into a meaningful pattern. Learning is an interaction between students and teachers that has been planned so that it becomes a regular

activity and causes students to have changes in behavior. Teachers need to create a learning environment that supports the learning process.

According to Jarolimek (1993) in Sapriya: 2017: 165 suggests that the basic purpose of learning by utilizing picture aids, for example, is so that the message conveyed is truly accurate. Another factor to consider is that pictures, photos, or illustrations should be appropriate for the developmental level/age level of the student.

According to Piaget in Rayandra (2011) the stage of cognitive development in elementary school students is at the stage of concrete operations 7-11 years, namely the child's thought process must be concrete, not abstract. Thus, at this time in solving problems children use concrete or physical logic. Then at this stage the child has begun to be able to arrange categories based on a hierarchy. Elementary school students are also at the formal operational stage aged 11 years and over, namely the thinking process at this time has begun to abstract, complex reasoning has begun to be used, and has been able to test one hypothesis in mentality (Nana Syaodih, 2009 in Sutirna, 2013). In essence, it can be concluded that the older the child, the higher the ability to think and the sharper the level of understanding in reading (Sapriya: 2017). By paying attention to students, teachers will be able to arrange good learning implementation.

In the learning process, various types of experiences can be obtained. As previously mentioned, Edgar Dale suggests a hierarchy of learning experiences based on the degree of concreteness and abstraction. Edgar Dale in the cone of his experience said that verbal symbols are the most abstract symbols because language is basically abstract, so teachers need to draw models, models of actual objects in presenting a particular lesson. Students will be able to understand / understand what is conveyed by the teacher. (Rayandra Asyar:2011:3)

According to Sapriya:2017:164 The most widespread use of visual aids in books are pictures, photos, and illustrations. It is used to acquire realism, to express thoughts, to remember actual objects, and in short to provide meaning in learning. This effort is made because words alone are not enough to convey messages or meanings accurately, precisely, and quickly like pictures. Pictures can also help in improving inquiry skills so that good social studies textbooks today are those that contain a number of pictures accompanied by a number of questions, not just a description of the content of the picture or illustration.

Various tools can be used by teachers to convey teaching messages to students through sight and hearing to avoid verbalism that may still occur if only visual aids are used. In an effort to use the media as a tool according to Edgar Dale (1969) in Rayandra Asyhar (2011) learning media are grouped based on the level of experience gained by the learner. The levels of experience are

arranged in a chart known as Dale's Cone of Experience. The most concrete experiences are placed at the bottom of the cone and the more abstract the more abstract the experience gets. This means that the use of real object media is the most effective in achieving learning objectives. According to Musfiqon (2012) the classification of experiences is widely followed by educators in determining what tools should be appropriate for certain learning experiences.

Learning in elementary schools includes Social Science subjects. Social Sciences are subjects taken from various social sciences. In social science lessons students learn social knowledge such as theories, cases, and examples of events that occur in society. Social Studies is an understanding of concepts related to society and the environment. Social studies examines a set of events, facts, concepts, and generalizations related to social issues, making social studies difficult to learn. Previous research conducted by Rusmawan (2013) stated that quite a lot of students had difficulties in learning to master social studies material. Difficulties in learning social studies are caused by the low level of student interest. Students' low interest in social studies is also evidenced by the low interest in reading in social studies subjects. According to Adiwiyarso (2008) in Rusmawan (2013) suggests that "quite a lot of students have difficulty in learning to master social studies teaching material is more due to low reading levels, and students' dependence in learning on teachers."

Based on the results of a survey from the Program for International Student Assessment (PISA) in 2015 - 2019 that the reading ability of Indonesian children aged 15 years in the international world is at an unsatisfactory level and places Indonesia in the lowest rank in OECD countries. In 2018-2019 Indonesia was ranked 72 out of 77 countries with a score of 371. In 2015 the reading score was 397. If you look at the decline in student interest in reading in 2015 and 2018.

One of the materials in Social Studies subject for class VI is ASEAN. ASEAN was established on August 8, 1967. Based on the 2013 curriculum, the ASEAN material studied by grade VI students is about geographical characteristics and socio-cultural, economic, political life in the ASEAN region, and Indonesia's role in cooperation in the fields of economy, politics, socio-culture, technology, and education within ASEAN. ASEAN material is contained in themes 1, 4, 5, 7, and 8 so that this material is taught intermittently.

The decline in students' interest in learning the ASEAN material is that learning is more teacher-centered. Students are not involved in the learning process. Students only listen to the teacher explain and then take notes on the material presented by the teacher. So that in learning some unpleasant events were found. Based on research conducted by Setiawan (2013) that learning Social Sciences is very boring so that bad behavior occurs during the learning process such as

truancy, leaving class when given the task of taking notes, falling asleep or falling asleep when the teacher explains, playing cellphone while taking notes or when explaining, and chatting with my classmates. This happens because the teacher always uses the lecture method. Teachers are not varied in carrying out the learning process, for example teachers only use the lecture method or ask students to take notes (Puskur: 2007: 6).

According to Asyhar (2011) in Nunuk Suryani, Achmad Setiawan and Aditin Putria (2018) the use of media can improve students' memory because media can increase students' attention and motivation towards learning materials. In teaching chemical element symbol material, the teacher uses media images, element cards, diagrams, photos, videos and so on rather than simply explaining the names of these chemical elements verbally so as to minimize conceptual errors in students.

Based on the results of researchers' interviews with 4 sixth grade teachers at SDN Grogol Selatan 05, SDN Grogol Selatan 08, and SDN Grogol Utara 05 on February 4, 2021 before the study, it was found that the low learning outcomes of students on ASEAN materials were caused by students being lazy to read books, materials, etc. too broad while learning time is little, ASEAN material is taught intermittently because the material is contained in different theme books so when students are asked about the previous ASEAN material they forget.

Based on the results of previous studies and interviews, the researchers wanted to develop an encyclopedia learning media. Researchers developed an encyclopedia media because based on Sri Erdawati's research (2018) that encyclopedia media can increase students' learning motivation. Researchers will develop an encyclopedia learning media that is valid, interesting and in accordance with the development of class VI students.

In line with previous research and to overcome the problem of social studies learning, especially on ASEAN material, the researcher wants to try to develop an encyclopedia media and is expected to be able to change the memorization pattern of students into a pattern of understanding. The ASEAN encyclopedia media is a learning media that presents ASEAN material that is equipped with pictures, colors that are designed as attractive as possible so that students are interested, and do not feel bored. This encyclopedia can be used as an e-encyclopedia so that it can be used in distance learning. Based on the background, the researcher will develop an encyclopedia learning media for grade VI elementary school.

By using developed media that is tailored to the needs of students and teachers in the classroom, it is expected to increase the effectiveness of learning which leads to increased student learning

outcomes. There are two main reasons for the importance of developing learning media. The two reasons are as follows:

1. Media limitations such as print media which requires a lot of money for printing and distribution, or computer-assisted media which requires adequate computer equipment and the ability of qualified students and teachers. For this reason, existing media can be developed or collaborated to overcome various limitations.
2. As the actualization of teachers in developing learning media from their abilities, as stated in the Regulation of the Minister of National Education Number 16 of 2007 concerning Academic Qualification Standards and teacher competencies, it is explained that teachers must utilize information and communication technology for learning purposes. Teachers also use information and communication technology to communicate and develop themselves. Government Regulation of the Republic of Indonesia Number 74 of 2008 concerning teachers article 3 paragraph 4 which states that one of the pedagogic competencies that must be mastered by teachers in managing student learning is the use of learning technology.

Based on the background of the problem, the research questions that will be elaborated are:

1. What are the steps to develop the ASEAN encyclopedia learning media in social studies subjects for class VI?
3. How is the feasibility of the ASEAN encyclopedia learning media in the class VI social studies subjects being developed?
3. How effective is the use of ASEAN encyclopedia learning media in social studies subjects for class VI?

This study intends to provide an overview of appropriate ASEAN encyclopedia learning media used in learning and can improve the learning outcomes of sixth grade elementary school students in social studies learning.

2 METHODOLOGY

This research is a type of research and development or in English terms it is called Research and Development (R & D). According to Borg and Gall (1983) in Amir Hamzah (2018) defines development research (a process used to develop and validate existing products or new products, it can also find knowledge or answer problems. To develop this research, the researcher uses the ADDIE model. The characteristics of the ADDIE model are to provide opportunities for learning design developers to collaborate with content, media and instructional design experts so as to produce good quality products. There are 5 stages in the implementation of the ADDIE model

development, namely: (1) analysis (analyze), (2) design, (3) development, (4) implementation, and (5) evaluation.

The subjects of this study were grade VI students at SDN Grogol Selatan 05, SDN Grogol Selatan 08, and SDN Grogol Utara 05 with different backgrounds. Both differ in students' abilities, parents' educational and occupational backgrounds, as well as differences in mileage and means of transportation used to go to school, and 6th grade teachers. Researchers used purposive sampling in finding samples. According to Sugiyono (2019:144) purposive sampling is a sampling technique for data sources with certain considerations.

The instrument is used as a measuring tool to collect data. The instruments used in this research and development are interviews and questionnaires. At the stage of needs analysis using interview instruments. At the product validation stage, media experts, material experts, and also linguists use a questionnaire instrument. At the stage of the One-to-One trial, the Small Group Trial and the Field Trial using questionnaires and observations. At the summative evaluation stage using test questions.

The instruments to be used are:

1. Needs Analysis Instrument

This instrument contains questions that aim to determine the needs of teachers in learning social studies material for ASEAN in class VI so that the encyclopedia media developed is in accordance with the needs.

2. Test Questionnaire for Material Experts, Linguists, and Design and Media Experts

3. Product Trial Questionnaire for Students

This feasibility test instrument will be shown to students as objects that will use the encyclopedia media product that has been developed. at the one-to-one trial stage there are three students, small groups of 9 people, at the field trial stage the Field Trials will be tested on 30 students. To determine the effect of the ASEAN encyclopedia media, researchers used tests in the learning process.

2.1 Development Procedure

The development procedure in this development research follows the steps instructed in the ADDIE development model including the following:

2.1.1 Analysis (analysis)

The purpose of this analysis is to clearly define the details of the program or design. At this stage the researcher analyzes matters related to the development of the encyclopedia, including:

2.1.1.1 Curriculum analysis

Curriculum analysis is done by reviewing the curriculum used. This is so that the developed encyclopedia can be used by various schools and is not based on a particular school curriculum. The things that are analyzed in the curriculum are the basic competencies that are expected, and the indicators that students must achieve in the ASEAN material.

2.1.1.2 Needs analysis

Needs analysis is carried out by analyzing the characteristics of students aiming to identify the characteristics of students according to their level of education. In this study, researchers examined references that discussed the psychological development of sixth grade elementary school students. In addition, researchers also conducted interviews with teachers. It is considered important to know the level of students' ability, motivation, and other aspects. The results of student analysis are used to determine whether elementary students are suitable for using the ASEAN encyclopedia learning media.

2.1.1.3 Analysis of the development of teaching materials

This media development analysis is carried out by reviewing references that discuss aspects that need to be considered in the development of teaching materials so that they can be classified into proper and good teaching materials. In this analysis, an assessment is carried out on aspects to create and develop a good encyclopedia, namely those that meet the aspects of the feasibility of the content of the material, the aspects of the feasibility of the media, and the aspects of the feasibility of the language. In addition to the encyclopedia aspects, an analysis of the scientific-based learning model is also carried out which is the basis for the encyclopedia to be developed, so that an ASEAN encyclopedia on social studies subjects will be obtained for grade VI students.

2.1.2 Design

After the analysis stage, the ASEAN IPS encyclopedia is designed. Activities carried out at the planning stage are:

- a. Prepare books and reference sources related to the material
- b. Compile a map of encyclopedia needs
- c. Encyclopedia design drafting

- d. Determining the title of the encyclopedia
- e. Determining the design of the encyclopedia

The steps to be taken in writing an encyclopedia are as follows.

- 1) Formulation of basic competencies that must be mastered, namely basic competencies derived from the 2013 content standards.
- 2) Design from the media side
- 3) Preparation of material topics
- 4) Determine attractive colors and images to support learning
- 5) Determine the writing structure
- 6) Preparation of assessment instrument design

An encyclopedia assessment instrument was developed to assess the validity, practicality and effectiveness of the encyclopedia. The validity of the encyclopedia will be assessed by three experts, namely a material expert, namely someone who masters social studies learning materials and concepts who are competent to provide an assessment related to the feasibility of content and presentation of material, a media expert is someone who masters media theory and concepts and is competent to provide an assessment of the feasibility of design, presentation and presentation. material, and a linguist, namely someone who has mastered the material and concepts of competent grammar who provides an assessment and feasibility of using the language contained in the ASEAN encyclopedia learning media with the approval of the supervisor.

The instrument for assessing the accuracy of the design or learning design, the accuracy of the content of teaching materials, and the attractiveness of the encyclopedia in the form of a questionnaire filled out by teachers and students. Before being used in encyclopedia assessment, the assessment instrument that will be developed will be validated first.

2.1.3 Development

According to Benny and Dewi (2019:1.26-1.27) at this step the design of teaching materials that have been outlined in the design will be written and produced into teaching materials that are ready to be studied and refined through a continuous revision process.

Researchers developed assessment instruments and student response questionnaires. The development of the assessment instrument is based on the points of a good LKS requirement. In addition, a student response questionnaire was also developed containing points of good teaching materials but changed with a more communicative grammar. After developing the research

instrument, the researcher developed test questions. The development of test questions is based on core competencies and basic competencies based on the material.

According to Sugiyono (2019:414) this stage aims to determine the validity of the products developed both from the media and material aspects. Product validation is carried out by expert lecturers, data about product deficiencies or weaknesses will be obtained. These shortcomings will then be corrected by the researchers.

The ASEAN Encyclopedia that has been validated is then tested on students. For student trials, there are three stages that will be given to individuals (one-to-one evaluation), small group trials (small group trials), and field trials (field trials). This stage will analyze the accuracy of the design or learning design, the accuracy of the content of teaching materials, the attractiveness, and effectiveness of the encyclopedia developed for students. The results of the student and teacher response questionnaires are used to measure the accuracy of the design or learning design, the accuracy of the content of teaching materials and the attractiveness of the encyclopedia and can be a reference for improving the encyclopedia.

The purpose of the development stage is to produce the final form of learning media after going through revisions based on expert experts or practitioners and test data. The limited trial stage, and extensive trials, and expert validation. The purpose of this stage is to validate or assess the feasibility of the design. Based on input from material experts, language, and media were revised to make the product more precise, effective, easy to use, and has high technical quality. Field trials were carried out to obtain direct input in the form of responses, reactions, comments from students as the target users of learning media and observers to the learning media that had been prepared. The test results are used to improve the product. In this one-on-one trial using a questionnaire. Quantitative data and descriptive information were collected using a questionnaire guide, then analyzed and used for revision. The purpose of this field trial is to determine whether the resulting product can be used in a learning context or not. The product that has been tested in the field is the final product that is ready to be implemented.

2.1.4 Implementation

According to Nunuk Suryani and colleagues (2018) there are two procedures in implementation:

2.1.4.1 Preparing teachers

Determining teachers who become development partners in implementing the implementation of the ASEAN encyclopedia media developed in the classroom, the previous teacher has been given guidance and direction regarding the implementation of the developed media.

2.1.4.2 Preparing students

Provide direction to students prior to implementation.

Implementation is the activity of using the product. The implementation of the ASEAN encyclopedia media that was developed is applied in grade 6 at SDN Grogol Selatan 05, Grogol Selatan 08, and SDN Grogol Utara 05 can be used as a companion book for the 2013 curriculum textbooks and work on the questions in the 2013 curriculum textbooks.

When in implementation, the teacher carries out learning by following the lesson plans, guiding students using the developed ASEAN encyclopedia media, and providing feedback. Student-centered learning.

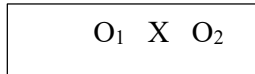
2.1.5 Evaluation

The purpose of the evaluation phase is to assess the quality of the developed media related to the learning process and outcomes, both before and after implementation. According to Nunuk Suryani et al (2018) there are two types of evaluations known, namely formative evaluation and summative evaluation. According to Seels and Richey (1994) in Nunuk Suryani (2018) formative evaluation is guided by technical studies, tutorials, and trials, and data collection methods are often informal, such as observation, interviews, questionnaires, and short tests. Summative evaluation requires more formal data collection procedures and methods such as standardized tests with validated questions, and using comparative group studies in a quasi-experimental design.

At this stage the evaluation carried out is a summative evaluation because this evaluation is to determine the effectiveness of learning media in improving learning outcomes. Learning outcomes are known by giving posttest practice questions whose material is taken from the developed learning media. During the implementation process, the learning media developed were tested for effectiveness through competency measurements before and after learning. If the learning competence is better than before, then the learning media developed is declared effective. The evaluation is carried out by giving posttest questions to students as users of the developed learning media, and then comparing them with the pretest scores that have been tested before learning using learning media begins.

To measure the level of influence of student learning outcomes in the use of the ASEAN Encyclopedia, researchers used paired t-tests by comparing learning outcomes before using and after using the ASEAN Encyclopedia media.

Image (One Group Prettest -Posttest Design)



Information :

O₁ = Value before treatment

O₂ = Value after treatment

X = Treatment

This data was obtained by using a learning achievement test conducted at the beginning of the lesson before using the ASEAN encyclopedia media (pretest) and at the end of the lesson after using the ASEAN encyclopedia media (posttest). The learning outcomes obtained are used by comparing the learning outcomes of the initial and final tests. To calculate the level of comparison using the t-test formula of two paired samples with a significance level of 0.5%

$$t = \frac{x_1 - x_2}{\sqrt{\frac{S_1^2}{n_1} + \frac{S_2^2}{n_2} - 2r \left(\frac{S_1}{\sqrt{n_1}} \right) \left(\frac{S_2}{\sqrt{n_2}} \right)}}$$

Information

x₁ = sample mean before treatment

x₂ = average sample after treatment

S₁ = standard deviation before treatment

S₂ = standard deviation after treatment

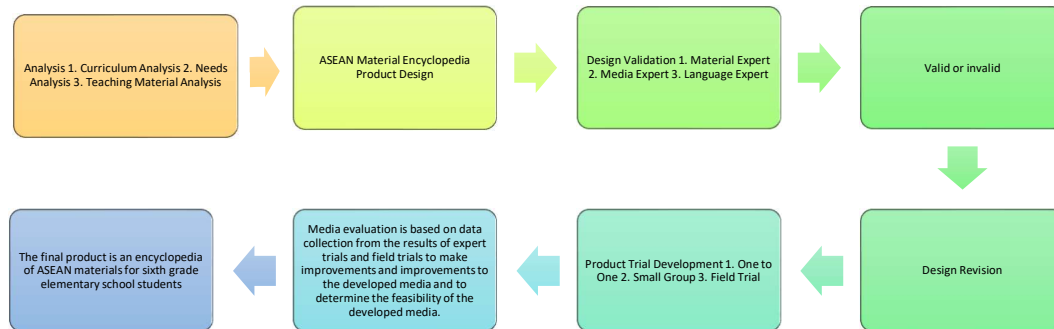
n₁ = number of samples before treatment

n₂ = number of samples after treatment

r = correlation between values before and after using the ASEAN encyclopedia media

The following is the flow of the stages of developing and researching ASEAN material encyclopedias as social studies learning media:

Figure 18 The Flow Of The Stages Of Developing And Researching ASEAN Material Encyclopedia as Social Studies Learning Media



2.2 Data analysis technique

The data that must be analyzed in this study are in the form of a media expert validation questionnaire, material, language and teacher and student responses. The measurement scale of the ASEAN encyclopedia development research used by researchers is by using the Likert scale. The Likert scale is referred to as a measuring tool for something that is expressed through a series of statements that will be given to respondents to provide answers. The scoring on the validation instrument data analysis can be seen in the following table:

Table 1 Scoring Table Of Validation Instrument Analysis

No.	Answer Options	Score
1.	Very precise, very appropriate, very clear, very interesting, very easy.	5
2.	precise, very appropriate, clearly interesting, easy.	4
3.	Quite precise, quite appropriate, clear enough, interesting enough, easy enough	3
4.	less precise, less appropriate, not very clear, less attractive, less easy.	2
5.	Very inaccurate, very inappropriate, very unclear	1

The results of the assessment scores from each material expert, linguist, and design and media expert were then averaged to determine the validity and feasibility of the encyclopedia.

The formula for the average score of the questionnaire (Arikunto, 2010):

$$x = \frac{\sum x}{N \times n}$$

x = average score

$\sum x$ = total score

N = number of question items

n = number of respondents

The average score of the questionnaire was then converted into a qualitative one using a five Sukardjo scale (2008). The results of the assessment scores from each validator of material experts, linguists, and media experts were then averaged to determine the validity and feasibility of the encyclopedia.

Product validation in this study uses a scale of five according to Sukardjo, 2006: 101). Based on these calculations, the above quantitative data is obtained and then the quantitative data is converted into qualitative data with a scale of five (Sukardjo, 2006: 52-53) as follows:

Table 2 Score Category Conversion

Score Interval	Category
4,22 – 5	Very Worthy
3,41 – 4,21	Worthy
2,61 – 3,40	Decent enough
1,80 – 2,60	Less worthy
<1,79	Very Less Worthy

The conversion of score categories becomes a reference for classifying the results of the average score obtained from the assessments of experts, teachers, and students in assessing the design quality of the ASEAN encyclopedia book product. After getting the product quality category, the product that gets the "decent" to "very feasible" category, then the product is ready to be tested by making revisions first. However, if the product is categorized as "poor" or "very poor", then the product needs to be revised and re-validated. Products that are suitable for use can then be used in the trial process.

3. FINDINGS AND DISCUSSION

The results of research and development obtained are as follows:

3.1. Analysis

In this study, researchers analyzed students' initial abilities, and the problems found in learning at SDN Grogol Selatan 05, SDN Grogol Selatan 08, and Grogol Utara 05 were the media used in the

teaching and learning process using student books as a teacher's handbook. At this stage the researchers conducted tests and interviews with teachers and students containing the media used during learning. Based on the results of the interviews, the researchers made the background of the problem and analysis of the needs to develop an encyclopedia learning media that can improve student learning outcomes in ASEAN materials.

3.1.1. Curriculum Analysis

At this stage the researcher made an ASEAN encyclopedia based on the 2013 curriculum.

3.1.2 Student Needs Analysis

At this stage, the researchers conducted a needs analysis which was carried out at SDN Grogol Selatan 05, SDN Grogol Selatan 08, and Grogol Utara 05. The things included were initial abilities, obstacles experienced, and learning resources used by students. Based on the results of the needs analysis, the researchers decided to develop an ASEAN encyclopedia learning media in the sixth grade of elementary school.

3.1.2.1 Teaching Materials

Based on the results of interviews with sixth grade students, the teaching materials used in the classroom are student books. Teachers sometimes use media and do not use learning media during the learning process.

3.1.2.2 Lesson Material

Based on the results of interviews with class VI students, the material that is difficult to learn is ASEAN material regarding geographical characteristics and socio-cultural, economic, political life in the ASEAN region and the cooperation of ASEAN countries in the fields of politics, security, socio-culture, and the role of Indonesia in such cooperation.

3.1.3 Teacher needs analysis

The needs analysis aims to determine the ASEAN learning process, learning models, teaching materials, and instructional media used when learning ASEAN in grade VI elementary school. The four aspects of the data were collected by interviewing the sixth grade elementary school teacher.

3.1.3.1 Method

Based on the explanation of the sixth grade teacher in learning not only use the lecture method. The learning model used is only a scientific approach because the 2013 curriculum is required to use the scientific method.

3.1.3.2 Teaching Materials

Based on the explanation of the sixth grade teacher in the class, there are student books to carry out learning activities and sometimes the teacher uses learning media such as learning videos about ASEAN countries. Students feel that seeing the video does not immediately understand so they have to watch it several times.

3.1.3.3 Learning Materials

Based on the explanation of the sixth grade teacher, sometimes there are difficulties when the material is difficult so that students take long to understand ASEAN material, especially about geographical characteristics and socio-cultural, economic, political life in the ASEAN region, forms of cooperation between ASEAN countries, and the role of Indonesia in cooperation.

3.1.3.4 Learning Process

Of the 4 respondents, 2 respondents had difficulty conveying the ASEAN material. 2 respondents experienced that students had difficulty understanding ASEAN material, obstacles in teaching ASEAN. 1 respondent stated that students were not interested when the teacher delivered ASEAN material. 3 respondents experienced that students were not enthusiastic about participating in learning about ASEAN.

3.1.4 Media Development Analysis

In the preparation of product manufacture, it is important to consider methods, media, materials, sources and barriers, ideas and materials for making media, determine images and colors, determine the equipment needed and formulate into a physical form. The results of the product planning stages that have been carried out by researchers are as follows:

3.1.4.1 Choosing Method

The learning method used in the implementation of the ASEAN encyclopedia media learning media is a scientific approach. The scientific approach was chosen because in it there are 5 steps in the learning, namely observing objects students are asked to observe the ASEAN encyclopedia

learning media, then students ask about the ASEAN encyclopedia learning media after observing, then collect information from reading ASEAN encyclopedia books, process information, and communicate the results of trying to use the ASEAN encyclopedia. ASEAN encyclopedia learning media. With a scientific approach students have the opportunity to learn actively, explore curiosity, and foster student interest in learning social studies so that students gain knowledge based on the experiences they feel.

3.1.4.2 Selecting Media

The media that the researcher chose was learning media in the form of 2 dimensions that had a real form in working on ASEAN questions that were adapted to the characteristics of sixth grade elementary school students. At this stage, the researcher made the ASEAN encyclopedia learning media in the form of a book.

3.1.4.3 Choosing Material

In accordance with the name of the media, namely the ASEAN encyclopedia learning media which contains geographical characteristics, socio-cultural, economic, political life in the ASEAN region, cooperation between ASEAN countries, and Indonesia's role in cooperation in the economic, political, social, cultural, technological, and social fields. , education within the scope of ASEAN in social studies learning class VI SD.

3.1.4.4 Create learning objectives

The learning objectives in using the ASEAN encyclopedia learning media are as follows:

- a) By using this ASEAN encyclopedia Learning Media, students will find it easier to learn about ASEAN.
- b) By using this ASEAN encyclopedia Learning Media, students are able to learn ASEAN independently.
- c) By using the ASEAN encyclopedia learning media, students are more enthusiastic about learning so that their learning outcomes increase.

3.2 Developed ASEAN Encyclopedia Media Design

After getting the data obtained from interviews, the next step is to design learning media in the form of an ASEAN material encyclopedia for class VI SD. The steps taken by the researchers are:

- a. Create a flowchart containing flowcharts in the ASEAN encyclopedia media. The flowchart that is built is in the form of a flowchart of the structure of the material or message to be conveyed through the ASEAN encyclopedia media. The media encyclopedia flowchart is designed with the aim of explaining the flow of material and media. Furthermore, the flowchart becomes the designer's guide in compiling the material in the table of contents.
- b. Collecting sources obtained from books on ASEAN, google, and youtube.
- c. Design material in Power Point and Word.
- d. Designing an encyclopedia using the adobe illustrator application. Selecting the paper used. The researcher decided to use 120gr Art Paper so it wouldn't tear easily.
- e. Prepare test questions based on basic competencies and indicators for social studies lessons for grade 6.
- f. Create an assessment instrument

3.3 Development

At this stage the research aims to create an ASEAN encyclopedia learning media that has been designed. Development is the process of making a design a reality. According to Benny and Dewi (2019), the design of teaching materials that have been outlined in the design will be written and produced into teaching materials that are ready to be studied and refined through a revision process that is carried out continuously and validates the media.

The media trial was carried out in two stages, namely: the first stage was the validity test by linguists, subject matter experts, and media experts and instructional media design. This validation is carried out so that the learning media developed is to obtain certainty that the media is feasible to be tested on students. Expert validation is useful for checking errors in writing language, material and design in an encyclopedia that is tailored to the needs of students.

The second stage tested the practicality of the individual group (one-to-one trial), small group trial (small group trial), large group (field trial), and 4 grade VI teachers at SDN Grogol Selatan 05, Grogol Selatan 08, and Grogol Utara 05.

Based on the results of expert reviews and field trials that have been carried out in the development stage, two stages of data analysis were carried out, namely qualitative and quantitative data analysis. Qualitative data analysis is used to process data in the form of input, criticism and

suggestions from experts and field tests for further revision in stages for the development of better media. While the analysis of quantitative data obtained from the assessment of respondents in the form of numbers in the questionnaire given. All stages of this evaluation are aimed at the feasibility of the final product. Decent in terms of content, design and language.

3.3.1 Material Expert Assessment

The material expert assessment was carried out by Dr. Sidik Puryanto, M.Pd Based on table 4.4, the average score is 4.71. In accordance with the encyclopedia product table stated in the criteria very feasible. Products that have been developed and have been worthy of assessment are worthy of being tested in the field.

3.3.2 Linguist Assessment

The assessment of the development of the encyclopedia learning media is carried out by linguists who are experts in their fields. The assessment was carried out by Dra. Lis Setiawati, M.Pd. Obtained an average of 4.67. According to the conversion table, the encyclopedia product score category is stated in very feasible criteria. Products that have been developed and are eligible for assessment are worthy of being tested in the field.

3.3.3 Design and Media Expert Assessment

The assessment of the development of the encyclopedia learning media is carried out by experts in the field of design and learning media experts. The assessment was carried out by Dr. R. Benny A.Perbadi, M.A. Obtained an average rating of 4.83. According to the conversion table, the encyclopedia product score category is stated in very feasible criteria. The product that has been developed has been feasible in the assessment and is feasible to be tested in the field.

Table 3 Results of Expert Formative Evaluation Recapitulation (Expert Review)

Respondents	Number of Items	Score obtained	Average
Material Expert	21	99	4,71
Design and Media Expert	23	111	4,83
Linguist	9	42	4,67
Total			14,21
Average			4,74
Category			Very Eligible

From the evaluation results above, the average overall score obtained from the experts is 4.74, which means it is very feasible

Based on the average results of the 3 experts obtained an average value of 4.74. In accordance with the conversion of the encyclopedia product score category, it is stated in the very feasible criteria, this is reinforced by the assessment of three experts that the product that has been developed has been feasible in the assessment and is worthy of being tested in the field.

3.3.4 Individual Trial Assessment (one to one trial)

The implementation of this one-to-one trial was carried out to get an assessment as well as criticism and suggestions. Respondents for the one-to-one trial were taken by 3 students in grade VI, SDN Grogol Selatan 05, SDN Grogol Selatan 08. SDN Grogol Utara 05.

Obtained an average of 4.58. According to the conversion table, the encyclopedia product score category is stated in very feasible criteria.

Students are asked to provide comments on the products developed. Students' comments on the developed ASEAN encyclopedia are that each ASEAN member country is limited by different colors so that students can easily distinguish the boundaries of each country. The images displayed are in accordance with the content of the material. The layout of the image is appropriate and easy to observe. The colors used are comfortable to see, the size of the ideal ASEAN encyclopedia. The material in the media makes learning fun. This media makes it easier to work on ASEAN problems. The quality of the book is very good and the pictures are clear and there are no flaws

3.3.5 Small Group Trial Assessment

The small group trial assessment was carried out by 9 students. Each school sent 3 students to fill out questionnaires and interviews. The test results obtained with an average value of 4.4. According to the conversion table, the encyclopedia product score category is stated in very feasible criteria.

The students commented that the encyclopedia was very good to understand and that the writing was easy to read. The picture is very good, pleasing to the eye, and in accordance with the content of the material. The layout of the image is appropriate and easy to observe. The colors used are pleasing to the eye. The size of the ASEAN encyclopedia is ideal. The material in the media makes learning fun. This media makes it easier to do the questions. The book is easy to read because the writing is large. The size of the book is just right, not too big.

3.3.6 Field Trial Assessment

After the implementation of the small-scale trial, the assessment stage was carried out on a field-scale trial involving 30 students from SDN Grogol Selatan 05, SDN Grogol Selatan 08, and SDN Grogol Utara 05. Based on the percentage score, the average score was 4.5. In accordance with the conversion table, the encyclopedia product score category is stated in the criteria very suitable for use in learning social studies subjects.

Students from SDN Grogol Selatan 05, SDN Grogol Selatan 08, and SDN Grogol Utara 05 had a good response about the encyclopedia learning media on ASEAN grade VI elementary school materials.

3.3.7 Educator Assessment

The assessment of the development of the encyclopedia learning media was carried out by 4 educators from SDN Grogol Selatan 05, SDN Grogol Selatan 08, SDN Grogol Utara 05. Based on the assessment scores obtained an average of 4.5. In accordance with the score category conversion table, the product that has been developed is very feasible in the assessment.

3.3.8 Design Revision

The encyclopedia on ASEAN grade VI SD material was validated by expert validators in their fields, so the next step was to improve the design of the ASEAN material encyclopedia learning media as learning material for social studies subjects in accordance with the criticisms and suggestions of the expert validators. The validation results provide information to researchers regarding weaknesses in the developed media.

In accordance with the criticisms and suggestions that have been given by expert validators to the ASEAN encyclopedia class VI SD as learning material for social studies subjects, the researchers made revisions to correct errors and deficiencies in the media used as a reference in social studies learning.

3.3.9. Individual Trial Results (one-to-one trial)

The individual trial (one-to-one trial) aims to identify the shortcomings of the initial product that has been designed and has been assessed by experts. This trial was conducted between an instructional designer and three students individually, the three students were selected based on their abilities, namely moderate, above-medium, and below-medium abilities so that they can be

seen as representative samples (Suparman, 2012). In this one-on-one trial, more emphasis was placed on aspects including readability of the text, understanding of the encyclopedia material developed using interview guidelines. Based on the table above, it is known that the average individual trial result is 4.6. After being converted to a Likert scale conversion table, the level of achievement of 4.6 is in a very feasible qualification so that this teaching material does not need to be revised.

3.3.10 Small Group Trial Results

Small group trials were conducted with a larger number of students, and to re-test the revised initial product from the one-to-one or one-to-one trial. In small group trials, the optimal number of students is between 8 and 20 (Branch, 2009). Thus, the small group trial subjects in the development of the ASEAN encyclopedia media involved 9 students at SDN Grogol Selatan 05, Grogol Selatan 08, and Grogol Utara 05 which consisted of 3 people with low abilities, 3 people with moderate abilities, and 3 people with high abilities. Quantitative data and descriptive information were collected using interview guidelines and questionnaires, then analyzed and used for revision. Based on the table the average test results of the small group is 4.4. After being converted to a Likert scale conversion table, the level of achievement of 4.4 is in a very feasible qualification so that this ASEAN encyclopedia media does not need to be revised. Criticisms and suggestions from respondents in small group trials in questions through questionnaires, were accepted and taken into consideration to improve teaching materials.

3.3.11 Field Trial Results

The purpose of this stage is to determine whether the resulting product can be used in a learning context or not. After being revised based on input from small group trials, the product will be tested in the field in teaching and learning activities (Suparman, 2012). The product that has been tested in the field is the final product that is ready to be implemented. The Large-Scale Trial consisted of 30 students at SDN Grogol Selatan 05, Grogol Selatan 08, Grogol Utara 05. Based on the table results the average field trial results (field trial) was 4.5. After being converted to a Likert scale conversion table, the level of achievement of 4.5 is in a very decent qualification so that this teaching material does not need to be revised. Criticisms and suggestions from respondents in large group trials in questions through questionnaires, were accepted and taken into consideration to improve teaching materials.

The average result of the large group test (field trial) was 4.5. After being converted to a Likert scale conversion table, the level of achievement of 4.5 is in a very decent qualification so that this teaching material does not need to be revised. Criticisms and suggestions from respondents on individual trials in questions through questionnaires, were accepted and taken into consideration to improve teaching materials.

3.3.12 Educator Assessment

The teacher assessment was carried out at SDN Grogol Selatan 05, SDN Grogol Selatan 08, and SDN Grogol Utara 05 with an assessment sheet covering 8 aspects including content aspects, presentation aspects, language aspects, design aspects, language aspects, grammatical structure aspects, and aspects. vocabulary and spelling, totaling 15 assessment points, which were assessed by 4 educators in grade VI who have been teaching for 5 years and have the status of civil servants.

This educator assessment aims to improve the shortcomings and weaknesses of the encyclopedia learning media in ASEAN sixth grade elementary school materials as one of the reference media in the social studies subject learning process.

The average result of the educator's assessment is 4.5. After being converted to a Likert scale conversion table, the level of achievement of 4.5 is in a very decent qualification so that this teaching material does not need to be revised. Criticisms and suggestions from respondents on the assessment of educators in questions through questionnaires, were accepted and taken into consideration to improve teaching materials.

3.3.13 Design Revision

The encyclopedia on ASEAN grade VI SD material was validated by teachers and students, so the next step was to improve the design of the ASEAN material encyclopedia learning media as learning material for social studies subjects in accordance with the criticisms and suggestions of teachers and students. The validation results provide information to researchers regarding weaknesses in the developed media.

3.4 Implementation

The implementation phase in this study was carried out by testing the media in the implementation of learning. The implementation of the ASEAN encyclopedia media developed was carried out in grade 6 at SDN Grogol Selatan 05 with 58 students, South Grogol 08 with 35 students, and SDN

Grogol Utara 05 with 30 students. The ASEAN encyclopedia media is used as a companion book for the 2013 curriculum text book and working on the questions in the 2013 curriculum text book.

When in implementation, the teacher carries out learning by following the lesson plans, guiding students using the developed ASEAN encyclopedia media, and providing feedback. Student-centered learning.

3.5 Evaluation

It is known that the average value of learning outcomes before using the developed ASEAN encyclopedia media $x_1 = 57.64$, standard deviation $s_1 = 16.52$, and variance $s_1^2 = 272.82$. The average learning outcomes after using the developed ASEAN encyclopedia media $x_2 = 65.98$, standard deviation $s_2 = 16.54$ and variance $s_2^2 = 273.4425$. The correlation between the values before and after using the ASEAN encyclopedia media developed by r was found to be 0.776. These values are entered in the t formula:

$$t = \frac{57.64 - 65.99}{\sqrt{\frac{272.8211}{123} + \frac{273.4426}{123} - 2 \cdot 0.776 \left(\frac{16.53}{\sqrt{123}}\right) \left(\frac{16.54}{\sqrt{123}}\right)}} = -8.4054$$

The t value is then compared with the t table price with $dk = 123 + 123 - 2 = 244$. With 244 dk and an error rate of 5%, then $t_{table} = 1.9697$. The value of t count is smaller than t table ($-8.4054 < -1.9697$) so that H_0 is rejected and H_a is accepted. So there is a significant difference, the value of student learning outcomes before and after using the developed ASEAN encyclopedia media. After using the developed ASEAN encyclopedia media, student learning outcomes increased.

This shows that there is a significant effect on the difference between learning outcomes in the pretest and posttest. So that there is an effect of using ASEAN encyclopedia learning media on learning outcomes before and after using ASEAN encyclopedia media. This has also been done by Samsul Nizar's previous research entitled Development of Encyclopedia of Medicinal Plants Collection of PT. Sido Appears as a Learning Media for Plantae Materials for Class X SMA. Validation of Encyclopedia of Medicinal Plants collection of PT. Sidomuncul is declared in the very feasible category with a percentage of 97.5% by the media validator, feasible with a percentage of 77.5% by the material validator, and very feasible with a percentage of 87.5% by the learning device validator as a learning medium for Plantae material for class X SMA.

4 CONCLUSION

This R & D research produces learning media in the form of an ASEAN encyclopedia for class VI SD which is suitable for use in learning. The research that has been done can be concluded that:

1. The development model used in this study is the ADDIE model. Product development procedures include: (1) analyzing the needs of teachers and students, curriculum and media development by determining the learning objectives that will be used in preparing the ASEAN encyclopedia learning media, choosing strategies, media, materials and considering methods, sources, barriers, images and colors , and formulate it into physical form, (2) designing by making flowcharts, collecting sources, designing materials, designing encyclopedias, selecting papers, compiling test questions, compiling questionnaires (3) developing by making products, validation of media experts, materials, language , conducting individual trials, small groups, large groups, and assessments of educators (4) implementing the ASEAN encyclopedia media developed in the implementation of learning (5) evaluating to find out whether the resulting product can improve learning outcomes.
2. Teaching materials in the form of encyclopedias on ASEAN grade VI SD materials that have been developed have been tested through a material validation questionnaire with an average assessment of 4.71 categorized as very feasible, a Language validation questionnaire with an average assessment of 4.67 categorized as very feasible, a questionnaire design and media validation with an average assessment of 4.83, the educator's response test with an average assessment of 4.5 which is categorized as very feasible. The ASEAN encyclopedia learning media was tested one to one at SDN Grogol Selatan 05, SDN Grogol Selatan 08, Grogol Utara 05 with an average rating of 4.58 which was declared very feasible, small group trials with an average rating, 4, 4 and the large group trial obtained an average rating of 4.5 which was categorized as very feasible.
3. To calculate the effectiveness of the encyclopedia media on learning outcomes, the paired t-test formula is used. After entering into the paired t-test formula, the t-count value is -8.4054 with $dk = 244$ and the error rate is 5%, then $t\text{-table} = 1.9697$ so that the t-count value is smaller than t-table ($-8.4054 < -1.9697$). This means that H_0 is rejected and H_a is accepted. So there is a significant difference, the value of student learning outcomes before and after using the developed ASEAN encyclopedia media. After using the developed ASEAN encyclopedia media, student learning outcomes increased.

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Based on the results of research and development of learning media in the form of encyclopedias on ASEAN grade VI SD material, suggestions for further product development are as follows:

1. Schools are expected to be able to help teachers as alternative media in ASEAN learning so that students become active and improve learning outcomes.
2. Learning using learning media in the form of encyclopedias on ASEAN grade VI elementary school materials can be developed by educators on an ongoing basis for different materials.
3. Tried learning activities using learning media in the form of encyclopedias on ASEAN grade VI elementary school materials on different research subjects.

In making learning media in the form of encyclopedias on ASEAN class VI SD material, there are several obstacles and difficulties that might be an improvement for other researchers to develop learning media in the form of encyclopedias on ASEAN class VI SD material with other materials, including paying attention to the choice of words and the right concept, as well as images related to the material in an interesting way.

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