Development of Teaching Materials in the Shape of Encyclopedias in Social Studies Subjects for Pre-literate Materials

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ABSTRACT

This research aims to (1) develop teaching material in the form of an encyclopedia in social studies subject for pre-literacy in VII grade at MTs Mambaul Huda Ngraseh in the 2020/2021 academic year, (2) to know the effectiveness of teaching material in the form of encyclopedia in social studies subject for pre-literacy in VII grade at MTs Mambaul Huda Ngraseh in the 2020/2021 academic year. This research is development research that uses Sugiyono's development model as a line of research stages. Data analysis was used in this research, namely qualitative and quantitative data analysis techniques. The product that has been made, then validated by material experts, design experts, and linguists in sequence show: (1) the value of 77% is in the "valid" category, and the value of 92% is in the "very valid" category; (2) the value of 53% is in the "less valid" category, and the value of 92% is in the "very valid" category; (3) the value of 89% is in the "very valid" category. The trial result of small groups and large groups in the sequence indicates: (1) the value of 87,86% is in the "very effective" category; (2) the value of 87,20% is in the "very effective" category. The results of the questionnaire student's response get a score of 89% is in the "very interest" category. Based on the research, it can be concluded that teaching material in the form of an encyclopedia in social studies that experts have validated is worth using as a learning resource for social studies, and social studies teaching material in the form of an encyclopedia are effectively used as social science teaching materials for social studies subject for pre-literacy in VII Grade.

A B S T R A K

Penelitian ini bertujuan untuk (1) mengembangkan bahan ajar berbentuk ensiklopedia pada mata pelajaran IPS materi masa praaksara di kelas VII MTs Mambaul Huda Ngraseh tahun pelajaran 2020/2021, (2) mengetahui kefektifan bahan ajar IPS berbentuk ensiklopedia pada mata pelajaran IPS materi Masa Praaksara Kelas VII di MTs Mambaul Huda Ngraseh Tahun Pelajaran 2020/2021. Penelitian ini merupakan penelitian pengembangan (*Research and Development*), yang menggunakan model Sugiyono sebagai alur tahapan penelitian. Analisis data yang digunakan dalam penelitian ini yaitu teknik analisis data kualitatif dan kuantitatif. Produk yang telah dihasilkan, kemudian divalidasi oleh ahli materi, ahli desain, dan ahli bahasa dengan berurut-urut menunjukkan: (1) nilai 77% kategori "valid" dan nilai 92% kategori "sangat valid"; (2) nilai 53% kategori "kurang valid" dan nilai 92% kategori "sangat valid"; (3) nilai 89% kategori "sangat valid". Hasil uji coba kelompok kecil dan kelompok besar berurut-urut menunjukkan: (1) nilai 87,86% kategori "sangat efektif"; (2) nilai 87,20% kategori "sangat efektif". Hasil angket respon peserta didik mendapatkan nilai 89% kategori "sangat menarik". Berdasarkan penelitian, dapat disimpulkan bahwa bahan ajar IPS berbentuk ensiklopedia yang dikembangkan telah tervalidasi oleh para ahli sehingga layak digunakan sebagai sumber pembelajaran mata pelajaran IPS dan bahan ajar IPS berbentuk ensiklopedia efektif digunakan sebagai bahan ajar pada mata pelajaran IPS materi Masa Praaksara di kelas VII.

Introduction

Education is a business process carried out by humans to grow and develop self-carriage potentials, both physically and spiritually, in accordance with the values and norms that apply in society and culture (Muhammad, 2015). Reliable and high-quality human resources can be obtained through education. It is explained in surah al-Alaq that Allah SWT commands humans to read before ordering other work. The word "read" in the letter al-Alaq implies that Allah SWT ordered humans to learn. Through education, humans can learn to absorb the knowledge that can be used as a provision for life in the world.

Social science is one of the important subjects taught to students at school. Social studies were learning aims to train students to think critically and responsively with various

points of view to produce the right solution to solve problems that exist in society. Through meaningful social studies learning, students can communicate skillfully, develop an understanding of specific issues, improve critical thinking skills, and improve intrapersonal skills (Setyowati & Fimansyah, 2018).

Based on interviews conducted by researchers with social studies subject teachers at MTs Mambaul Huda Ngraseh, the use of social studies teaching materials used by students was only in the form of worksheets as learning resources. The lack of variety of teaching materials can make implementing social studies learning less than optimal. The teaching materials used are considered unattractive because the lack of visualization of the learning materials makes it difficult for students to understand the material, and the teaching materials used have not provided equal facilities for each student.

The knowledge gained from social studies lessons must be understood well by reading descriptions and listening to explanations. This is because IPS has a broad scope of material. Suppose only focus on conventional teaching materials without being accompanied by creativity to develop existing teaching materials innovatively. In that case, it can impact the decline in the quality of learning (Prastowo, 2013). Especially in the Pre-literacy material, which has never been found in the Pra-aksara period in the area, students' lack of practical experience must be accompanied by deeper visualization of social studies teaching materials, especially in Pre-literacy material, which is a historical discipline.

Special attention from teachers is needed to achieve competence and learning objectives. Increased creativity needs to be done to develop teacher professionalism in creating a good learning process. It not only creates interesting learning methods and strategies and provides varied teaching materials. The use of exciting teaching materials can be done as an effort to increase student interest in the learning process.

The development of teaching materials in the form of encyclopedias can be used as an alternative solution to existing problems. A penchant for pictures can add enthusiasm to historical learning material (Bhuwana et al., 2017). The practical approach in the encyclopedia includes a combination of text and images that, according to Alsted, can be used as a memory tool (Palló, 2006). Interesting readings with few descriptions and lots of pictures or colors tend to be liked by students. Pictures can help direct the reader's imagination to align with the truth of the material presented by the teacher. The performance of the brain in remembering can also be increased through imagination. Encyclopedias have different characteristics from other books. Namely, they have explanations of specific terms, which are accompanied by explanations arranged alphabetically or thematically, as well as historically-chronologically. The contents of the encyclopedia include terms, are visualized in the form of pictures and illustrations, and are equipped with explanations that are easy to

understand. The Preaksara Encyclopedia teaching materials aim to increase students' understanding of social studies concepts. Then it is hoped that students can study harder so that they can compete globally in the future and can be an effort to improve the quality of education.

Literature Review

Teaching Materials

Teaching materials are a set of materials that are arranged systematically or sequentially, both written and unwritten, to create a learning environment that allows students to carry out learning (Prastowo, 2013). If they are not designed systematically, they cannot be called teaching materials even though these materials contain subject matter.

Teaching materials are needed by teachers in planning and reviewing the implementation of learning. This is because teaching materials contain information, tools, and texts arranged based on learning principles. The teaching materials are divided into four: Prastowo (2013). (1) Printed teaching materials are teaching materials used for learning purposes or the delivery of information archived on paper, such as handouts, modules, student worksheets, encyclopedias, etc. ; (2) Listening/audio teaching materials are teaching materials that can be played or heard by a person or group of people using radio signals directly, such as cassettes, radios, audio compact disks; (3) Visual and/audio-visual teaching materials are all forms of combinations of audio signals with sequential moving images, such as films; (4) Interactive teaching materials are a combination of several media (audio, text, graphics, images, animation, and video) that can be controlled by commands or natural behavior from a presentation, such as interactive PPT.

The aspects that are used as a basis for consideration in determining teaching materials are: (1) A concept is an idea or a general idea or understanding about a thing; (2) a principle is an essential guide or truth to connect two or more concepts as a starting point for thinking; (3) Fact is a thing or object that has happened or has been done; (4) The process is a series of changes or movements towards development that occur and can be tested and observed; (5) Values are patterns, sizes, types, or models that are considered correct in the community; (6) Skill is an individual's ability to do something well. (Hamdani, 2011).

Encyclopedia

The encyclopedia is a book/series that collects information or descriptions about various things in the arts and sciences arranged alphabetically or in a specific scientific environment. (Sulistyowati et al., 2019).

Encyclopedias can be used as alternative learning resources to provide accurate and up-to-date information and broaden their horizons for readers (Susanto et al., 2017). Encyclopedias can provide visualizations that can attract students' interest in the learning process by presenting pictures and illustrations to help explain the material being taught.

Some of the characters of the encyclopedia are: (1) There is an index; (2) it Has topics and sub-topics; (3) Equipped with a general explanation; (4) There are pictures, illustrations, graphs, and tables; (5) Arranged alphabetically or thematically, historical-chronologically; (6) There are instructions for use (Yesmaya et al., 2018). Encyclopedias are divided into three types, namely: (1) General/National Encyclopedias; (2) a special encyclopedia or subject encyclopedia; (3) International Encyclopedia (Prihartanta, 2015)

Using an encyclopedia can hone students' abilities to think critically, actively, and creatively (Arifah et al., 2017). Encyclopedias can also be used to increase students' general cognitive knowledge and as a complement to textbooks as a provider of new information in learning. Essential and complete information about a problem presented and its dynamic and easy-to-use nature make the encyclopedia one of the learning resources that can be used as an alternative to providing accurate and up-to-date information to students. (Sulistyowati et al., 2019).

Social Studies

Social studies integrate various branches of social science such as history, geography, sociology, economics, politics, law, culture, and simplified citizenship education for educational and teaching purposes in primary and secondary schools (Endayani, 2017). According to the NCSS (National Council for the social studies) in Gunansyah et al., (2018), there is ten relevant themes in social science, namely: (1) Culture; (2) Time, continuity, and change; (3) People, places, and the environment; (4) Individual and identity development; (5) Individuals, groups, and institutions; (6) Power, authority, government; (7) Production, distribution, consumption; (8) Science, technology, society; (9) Global connection; (10) Global citizen. The goals of Social Science, according to (Sapriya, 2017) are: (1) Knowing concepts related to the environment and people's lives; (2) Have basic logical and critical thinking skills, curiosity, inquiry, problem solving, and skills in social life; (3) Have a commitment and awareness of social and

human values; (4) Have the ability to communicate, cooperate, and have competence in the community.

Method

This research uses research and development methods (Research and Development) according to Sugiyono by using eight stages. The researcher first used the modified results of Sugiyono's research and development methods to collect information about the potential problems at MTs Mambaul Huda Ngraseh by conducting interviews. Researchers identified problems at MTs Mambaul Huda Ngraseh, especially class VII, namely, limited student learning resources because they only used LKS books, low student interest in learning because students always complained when given assignments by the teacher, and lack of interest in reading students towards learning materials that had the material. Broad as IPS.

The second step is data collection. Researchers collect various data and information for product planning which is expected to overcome these problems. Based on the previous step, the researcher then looked for library sources and relevant studies to solve the problems experienced in the school. In this study, researchers overcome the problems at MTs Mambaul Huda Ngraseh by developing teaching materials in the form of encyclopedias.

The third step is the design of teaching materials. This step is the time when the product begins to be developed. The product developed is social studies teaching materials in the form of an encyclopedia of material for Class VII Preaksara. Design planning starts from formulating indicators and objectives according to KD and continues with the collection of learning materials to complete product development. Preparation of materials and design of teaching materials using Microsoft Word application. After the product is made, it is saved as a PDF for printing.

The fourth step is validation by experts. Validation is carried out to test the results of the initial development. Researchers conducted interviews and distributed questionnaires to several competent experts in their fields, then the results of this step were used as the basis for revising the product. Three expert validators carried out the validation of teaching material products in the form of encyclopedias: material experts, design experts, and linguists.

The fifth step is the initial revision of the product development. Armed with the results of expert validation, the developed products' weaknesses will be known. These weaknesses can be reduced by improving the product according to suggestions from material experts, design experts, and linguists. After the revision, the teaching materials were returned to the expert validator for an assessment of the product's feasibility.

The sixth step is product testing. Product trials are carried out by conducting learning simulations using the developed product. Product trials were conducted by selecting several research samples using a purposive sample technique. The purposed sample is a technique

for collecting data sources with specific considerations. According to the teacher's suggestion, the researcher chose a sample of 6 students heterogeneously based on class rank. Sampling aims to make this product trial balanced and even so that all high and low students can use it.

The seventh step is product revision. Suppose there are weaknesses or deficiencies in the teaching materials in the form of an encyclopedia of pre-literacy materials based on the previous stages. In that case, the researchers make revisions so that the product can be tested on a larger scale.

The eighth step is the last step of the research procedure sequence. In this step, the researcher used a trial in a large group trial class of 23 students. This usage trial was conducted to determine the effectiveness of using social studies teaching materials in the form of encyclopedias developed by researchers.

Results and Discussion

In the following, the results of the research findings and discussion include the results of validation by experts and the results of trials on the effectiveness of the use of social studies teaching materials in the form of an encyclopedia of Class VII Pre-aksara material.

a. Material Expert Validation

Material expert validation was carried out during two validation processes by Moh. Ridwan, S. Pd. as a social studies teacher at MTs Mambaul Huda Ngraseh. Analysis of data validation results from material experts contains an assessment of the product developed, namely social studies teaching materials in the form of an encyclopedia according to the calculation of quantitative data. Based on the assessment by material experts, the results of the analysis are as follows:

$$P = \frac{\sum x}{\sum xi} 100\%$$

Material expert score percentage I $= \frac{50}{65} 100\% = 77\%$

$$P = \frac{\sum x}{\sum xi} 100\%$$

Material expert score percentage II $= \frac{50}{65} 100\% = 92\%$

Information:

P = Percentage value

$\sum x$ = Total score obtained

$\sum xi$ = Maximum score

100% = Constant

Table 1

Tabel Kriteria Kelayakan Produk

Percentage	Criteria
81%-100%	Very valid
61%-80%	Valid
41%-60%	Not valid
21%-40%	Invalid
0%-20%	Totally invalid

Source: data from questionnaire

The percentage obtained from the validation analysis of the material expert I was 77%. After being converted to the product eligibility criteria table, the achievement rate of 77% is in the valid criteria. While the percentage obtained from the results of material experts II validation analysis is 92%. After being converted to the product eligibility criteria table, the 92% achievement rate is in the very valid criteria.

b. Design Expert Validation

Design expert validation was carried out during two validation processes by Dr. Moh. Sutomo, M. Pd., a lecturer in the Social Studies Tadris Study Program at IAIN Jember. Analysis of the data validation results from design experts contains an assessment of the product developed, namely social studies teaching materials in the form of an encyclopedia according to the calculation of quantitative data. Based on the assessment by design experts, the results of the analysis are as follows:

$$P = \frac{\sum x}{\sum xi} 100\%$$

$$D\textit{esign} \text{ expert score percentage I} = \frac{40}{75} 100\% = 53\%$$

$$P = \frac{\sum x}{\sum xi} 100\%$$

$$D\textit{esign} \text{ expert score percentage II} = \frac{40}{75} 100\% = 92\%$$

Keterangan:

P	= Percentage value
$\sum x$	= Total score obtained
$\sum xi$	= Maximum score
100%	= Constant

Table 2

Product Eligibility Criteria Table

Percentage	Criteria
81%-100%	Very valid
61%-80%	Valid
41%-60%	Not valid
21%-40%	Invalid
0%-20%	Totally invalid

Source: data from questionnaire

The percentage obtained from the validation analysis of design experts was 53%. After being converted to the product eligibility criteria table, the achievement rate of 53% is in the less valid criteria. While the percentage obtained from the results of the validation analysis of design experts II is 92%. After being converted to the product eligibility criteria table, the 92% achievement rate is in the very valid criteria.

c. Linguist Validation

Khitobul Umam carried out the validation of linguists, M. Pd. as a lecturer in Indonesian at IAIN Jember. Analysis of the data validation results from linguists contains an assessment of the product developed, namely social studies teaching materials in the form of an encyclopedia according to the calculation of quantitative data. Based on the assessment by linguists, the results of the analysis are as follows:

$$P = \frac{\sum x}{\sum xi} 100\%$$

Percentage of linguist scores $= \frac{40}{45} 100\% = 89\%$

Keterangan:

P   = Percentage value

$\sum x$ = Total score obtained

$\sum xi$ = Maximum score

100%   = Constant

Table 3

Product Eligibility Criteria Table

Percentage	Criteria
81%-100%	Very valid
61%-80%	Valid
41%-60%	Not valid

21%-40%	Invalid
0%-20%	Totally invalid

Source: data from questionnaire

The percentage obtained from the results of the validation analysis of linguists is 89%. After being converted to the product eligibility criteria table, the achievement rate of 89% is in the very valid criteria.

d. Small Group Trial

After the product has passed the entire series of validation stages and is declared suitable for use, the following IPS teaching material in the form of an encyclopedia can be tested in small groups of six students of Class VII MTs Mambaul Huda Ngraseh. Small group trials were conducted to determine the product's effectiveness to be applied to trials with larger groups. Data on small group trials were given to students through pretest and posttest questions. The following is the relative effectiveness formula used to measure the effectiveness of using social studies teaching materials in the form of an encyclopedia.

$$ER = \frac{MX2 - MX1}{(\frac{MX2 + MX1}{2})} \text{ x } 100\%$$

$$ER = \frac{86 - 33,50}{(\frac{86 + 33,50}{2})} \text{ x } 100\% = 87,86\%$$

Keterangan:

ER   : Relative effectiveness

MX1   : The mean or average value of the pretest

MX2   : The mean or average value of the posttest

100%   : Constant

Table 4

Product Eligibility Criteria Table

Percentage	Criteria
81%-100%	Very valid
61%-80%	Valid
41%-60%	Not valid
21%-40%	Invalid
0%-20%	Totally invalid

Source: data from questionnaire

Based on the data analysis that has been carried out using the relative effectiveness formula above, the percentage is 87.86%. If it is converted into a product effectiveness criteria table, then the criteria are very effective.

e. Large Group Trial

The product can be tested on a larger scale in large-group trials based on small-group trials. The large group trial was aimed at 23 seventh-grade students at MTs Mambaul Huda Ngraseh. The following is the relative effectiveness formula used to measure the effectiveness of using social studies teaching materials in the form of an encyclopedia.

$$ER = \frac{MX2 - MX1}{(\frac{MX2 + MX1}{2})} \times 100\%$$

$$ER = \frac{86 - 33,50}{(\frac{86 + 33,50}{2})} \times 100\% = 87,20\%$$

Keterangan:

ER : Relative effectiveness

MX1 : The mean or average value of the pretest

MX2 : The mean or average value of the posttest

100% : Constant

Table 5

Product Eligibility Criteria Table

Percentage	Criteria
81%-100%	Very valid
61%-80%	Valid
41%-60%	Not valid
21%-40%	Invalid
0%-20%	Totally invalid

Source: data from questionnaire

Based on the data analysis that has been carried out using the relative effectiveness formula above, the percentage is 87.20%. If it is converted into a product effectiveness criteria table, then the criteria are very effective.

f. Student Response Questionnaire

Student response questionnaires were used to determine the students' interest in social studies teaching materials in the form of an encyclopedia developed. There are seven questions in the student response questionnaire. The questionnaire was given and then responded to by six students in the small group trial and 23 students in the large

group trial. The following is the formula used to measure the level of student interest in social studies teaching materials in the form of an encyclopedia that was developed.

$$V\text{-au} = \frac{Tse}{Tsh}100\%$$

The percentage value of the small group student response questionnaire $= \frac{190}{210}100\% = 90\%$

$$V\text{-au} = \frac{Tse}{Tsh}100\%$$

The percentage value of the large group student response questionnaire $= \frac{190}{210}100\% = 89\%$

Keterangan :

V-au   : The percentage value of the small group student response questionnaire

Tse   : The total score obtained from student responses to the product developed

Tsh   : Maximum total score

100%   : Constant

Table 6

Product Eligibility Criteria Table

Percentage	Criteria
81%-100%	Very valid
61%-80%	Valid
41%-60%	Not valid
21%-40%	Invalid
0%-20%	Totally invalid

Source: data from questionnaire

Based on the study results, the percentage obtained from the results of the questionnaire analysis of student responses in the small group trial was 90%. The criteria are very interesting if it is converted into a product attractiveness criteria table. In comparison, the percentage obtained from the student response questionnaire analysis results in the large group trial was 89%. The criteria are very interesting if it is converted into a product attractiveness criteria table.

Conclusion

Based on the presentation of the data and the discussion that has been presented previously, the following conclusions can be drawn:

First, the product developed in this research is printed social studies teaching material in the form of an encyclopedia on Pre-aksara material. The developed product has met the eligibility requirements because it has passed the validator's validation process or feasibility test. Product validation was carried out by three experts: material experts, design experts, and language experts. The recapitulation of the assessment carried out by each validator shows that the social studies teaching materials in the form of an encyclopedia are suitable for use in learning.

Second, social studies teaching materials in the form of encyclopedias that have been developed can make learning effective. The results of the trials obtained the results of the small group trial of 87.20%, which were described as very effective, while the results of the large group trial obtained 87.29%, which were described as very effective. Social studies teaching materials in the form of encyclopedias were also considered interesting by students according to the level of interest obtained from student response questionnaires of 90% in the small group and 89% in the large group; the second was described as very interesting.

Based on the results of the trials that have been carried out, suggestions for using social studies teaching materials in the form of encyclopedias are: (1) Students should understand the instructions for using teaching materials so that they can be used optimally. In addition to studying these teaching materials, students are expected to read literature or other learning resources that are relevant to the material being taught. (2) Teachers can further develop teaching materials in the form of encyclopedias by adding other materials so that they are more varied into the encyclopedia series that are in line with the material for the Pre-aksara period. (3) In addition to being made in printed form, social studies teaching materials in the form of encyclopedias in the future can be made in digital versions that can be accessed via the internet so that they are more accessible to all groups.

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