

## The development of social science textbooks based on e-books

by

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<p><b>Article History</b> Submitted: 17-12-2023 Revised: 08-01-2024 Accepted: 14-03-2024</p> <p><b>Keywords:</b> E-book, Social Studies, Blended learning</p>	<p><b>Abstract</b> This study aims to produce a Social Studies e-book with a blended learning model for grade VIII students by describing (1) the process of Social Studies e-book development, (2) the feasibility of Social Studies e-book products, and (3) the effectiveness of Social Studies e-book. This research employs a Research and Development (RnD) with ADDIE development steps, which consists of five stages, namely: (1) analysis, (2) design, (3) development, (4) implementation, and (5) evaluation. The results of the study are as follows. (1) The Social Studies e-book development process includes reference collection, materials preparation, video recording, editing and merging, and completion. (2) The Social Studies e-books are declared eligible to be used in the Social Studies learning trial process based on the expert judgments: (a) media experts declare excellent category, (b) material experts state excellent category, (c) teacher responses show excellent category, (d) the small group student responses claim excellent category, (d) the significant group student responses say the good category. (3) The field trial results show that the scores of students who had completed the KKM increased from 17.85% at the pretest to 82.15% at the posttest stage. The hypothesis test results also indicate that <math>H_0</math> is rejected and <math>H_a</math> is accepted, meaning there is a significant difference in student learning outcomes. Therefore, the Social Studies e-book with the blended learning model is considered adequate.</p>
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### Introduction

Advances in science and technology bring adjustments in all areas of life, without exception in education. Currently, there is an information revolution, and the world of education must immediately adapt to rapid global changes, including changes in the pattern of life and human mindset (Khader, 2017). Education must prepare a strategy that pays more attention to educational components such as materials, methods, facilities, infrastructure, and evaluation to realize the expected goals and align with this century's learning needs. Learning needs have shifted from conventional learning to technology-based learning. Technology-based learning environments have become the main focus and trend in education. Technology-based learning requires students and teachers to equip themselves with digital capacity in the learning process (Rufaidah, 2020). Implementing technology in learning plays an essential role in providing various learning resources that can encourage students to be more active, creative, innovative, and independent in learning such as Digital technology is a powerful instrument that can help improve education in many ways, such as making it easier for instructors to create learning materials and providing new methods for people to learn and collaborate (Haleem et al., 2022).

With advances in information and communication technology, books, generally in the form of physical objects, are integrated with information and communication technology to become electronic books (e-books) that can be accessed through mobile phones or tablets anywhere and anytime. According to Lee and Owens (2004), an e-book is an electronic representation of a book that is usually published in print but in digital form. E-books

represent physical books that can be made more alive by including animation and sound in some e-books integrated with assessment tools and unique learning environments (Roslina et al., 2013). It is an IT-based book containing various digital information such as text, animation, and audio. This is supported by the fact that most current Gen Z students have characteristics of a technologically literate generation. Wahyuningrum and Azizah (2020) state that most of Gen Z currently have technological fluency, tech-savvy, web-savvy, and app-friendly generation is a "digital generation" proficient and compulsive about information technology and various computer applications. In addition to encouraging students' learning effectiveness, e-books are also helpful as a storage place for literature studies so that they can last a long time and are not easily stored in the form of files. Wati (2016) suggests that the benefit of e-books is that they preserve a large amount of book literature.

The condition of the covid-19 pandemic that hit Indonesia some time ago led to the issuance of a Circular Letter (SE) of the Ministry of Education and Culture (Kemendikbud) of the Republic of Indonesia concerning the Implementation of Educational Policies in the Emergency Period of the Spread of Corona Virus Disease (Covid-19) issued on March 24, 2020, which is an instruction from the government to prevent the spread of the Coronavirus by implementing distance learning. Thus, the application of distance learning indirectly requires teachers to prepare learning media that can be accessed remotely by both teachers and students. Zaharah (2020) argues that online learning is inevitable during a pandemic. Therefore, the development of e-books is expected to be an alternative to supporting the learning process in the world of education in the future. Innovative learning that utilizes networks and technology as media can be realized through interactive multimedia-based learning, and distance learning situations can utilize e-books.

The learning process must be more open, especially during the COVID-19 pandemic yesterday, causing the learning process to be carried out through blended learning. Blended learning is one of the learning models that can be applied in learning today. Kintu et al. (2017) revealed that the aspects combined in the blended learning model do not only combine face-to-face learning with online learning but can also take any form, including one of them being a textbook. Blended learning can be one of the efforts to increase students' motivation, interest, and awareness in learning (Rachman et al., 2019). Applying blended learning requires teachers to be more creative in developing learning methods and models to excite students during the learning process. The selection of material on the plurality of Indonesian society is based on the development of the political situation and the increasingly dynamic issue of Ethnicity, Religion, Race, and Intergroup (SARA), which requires a re-understanding of the various diverse contents that exist in Indonesian society. The content of plurality in Indonesian society can be presented from various perspectives to provide a more positive understanding and view. According to Sudrajat (2014), plurality-based learning empowers students to develop respect for people of different cultures, providing opportunities to work directly with people or groups of people of different ethnicities or races.

Referring to the results of observations of ten social studies teachers in Sleman Regency, it was found that print learning resources are still dominantly used by teachers as the main companion in supporting the social studies learning process. In the use of Electronic School Books (BSE), it was found that the BSE file format is in the form of PDF, which only

contains text content and images, so it does not give the impression and interest when accessed by students as an e-book. Similar conditions also occur during Distance Learning (PJJ), where teachers use printed textbooks. Limited communication or interaction between teachers and students makes learning less optimal, so giving assignments is more dominantly done by the teacher by utilizing the material in the textbook. This fact aligns with the results of research by Saliman et al. (2013), which state that teachers still minimally use varied textbooks, assuming the efficiency of time and material delivered. The reality in social studies learning that develops in schools today is that textbooks are often used. Most refer to the Student Worksheet (LKS) provided printing or library. This research aims to develop an e-book with a blended learning model on the material of the plurality of Indonesian society for grade VIII students.

## Method

This type of research is Research and Development (R&D) research, which produces e-book-based Social Science textbook products with a blended learning model on the material of sociocultural changes for grade VIII students. The development model researchers adopt is the ADDIE, which consists of analysis, design, development, implementation, and evaluation. Visually, the ADDIE model that Branch (2009) developed can be described with the steps shown in Figure 1.

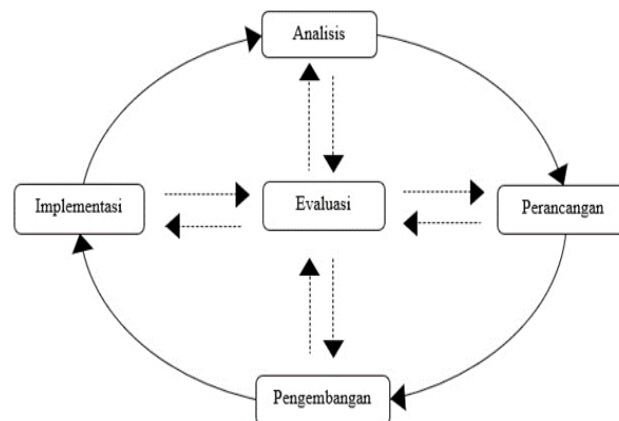


Figure 1. *ADDIE Development Models*

The analysis stage is the initial process of collecting relevant information to support the design of development products to suit the learning needs of students. Needs analysis is done using interviews, observations, and distributing questionnaires to social studies teachers and students. The design stage is based on the analysis and information-gathering results that researchers have carried out. E-books are designed with a blended learning approach that allows social studies learning to be more varied and can be used for independent learning by students. This stage consists of designing storyboards, preparing product material content, preparing product assessment instruments, and preparing lesson plans. The development stage is where researchers begin to design media products that will be made concerning the needs analysis results, both teacher needs analysis and student needs analysis. Learning media development is made by the development steps of Microsoft Word 2020, Corel Draw X7, Filmora X, and Flip Pdf Professional applications. Social studies e-books that have been developed will then be validated by media and material experts. Phase implementation (implementation), at this stage, is the result of products that have been developed and applied

(tested) in learning to determine their effect on the quality of learning, including the effectiveness, attractiveness, and efficiency of learning. In the evaluation stage, researchers make final revisions to the social studies e-book developed based on teacher and student response questionnaires while still considering input from media experts and material experts on the developed products.

Product trials were conducted based on data that media and material experts had validated. Product trials were conducted to determine the feasibility and effectiveness of social studies e-books developed. Media experts, material experts, and social studies e-book users (students) were involved in this design trial stage, with small and large-group trials. Then, the researchers distributed questionnaires to find out the responses of teachers and students after the trial was conducted and to determine what kind of evaluation and improvement needed to be done. The trial was conducted using a partial experimental technique with a before-after model. Data analysis techniques are used to analyze the quality of the products developed based on validity and effectiveness.

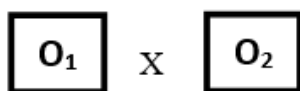


Figure 2. *One-Group Pretest-Posttest Research Design*

(Source: Sugiyono, 2017)

This research was conducted in several schools, including (a) SMP Negeri 3 Depok, (b) SMP Negeri 1 Pakem, (c) SMP Negeri 4 Tempel, (d) SMP Negeri 2 Ngaglik, (e) SMP Negeri 2 Gamping, (f) SMP Muhammadiyah 1 Kalasan, (g) SMP Muhammadiyah 1 Sleman, (h) SMP Muhammadiyah 1 Berbah, (i) SMP Muhammadiyah 2 Godean, (j) SMP Muhammadiyah 2 Depok.

## **Result and Discussion**

### **1. Analysis Stage**

#### **a. Teacher Needs Analysis Results**

Referring to the results of interviews with ten social studies teachers in Sleman Regency, several findings were obtained, among others; first, print learning resources are still dominantly used by teachers as the main companion in supporting the social studies learning process. The existence of other supporting learning resources is less optimized to enrich the teacher's reference when implementing the learning process.

Similar conditions also occur during Distance Learning (PJJ), where teachers use printed textbooks. Limited communication or interaction between teachers and students makes learning less optimal, so the teacher more dominantly carries out the provision of assignments by utilizing the material in the textbook. The role of the teacher in learning activities is still dominant. The availability of learning resources teachers provide students is often not optimized to support independent classroom learning.

#### **b. Student Needs Analysis Results**

Social studies were learning dominantly using printed textbooks. Most students respond that they are less satisfied with the textbooks teachers use today. Student dissatisfaction with the use of textbooks, among others, (a) difficulty understanding the material, with the presentation of the material in the book, students feel too much text,

causing boredom to read and understand the material to the fullest. This condition also occurs in distance learning (PJJ) with the use of books that are less varied and tend to be used only for assignments, (b) textbooks that are printed are incomplete because certain pages are missing or torn so that some information in the book becomes incomplete, (c) books are less practical because they are heavy and easily wrinkled when carried by students.

Based on the problems described, students need to develop social studies e-books that are interesting and practical to access. Some input is given by students in the development of social studies e-book, among others: (a) the presentation of material in the e-book is easy to understand so that it can be used for self-study, (b) the presentation of material in the book is not only in the form of text and images but added videos, music, links to make it easier to understand the material and increase interest in learning, (c) the book is easily accessible with digital devices, such as laptops or mobile phones so that it makes it easier to access books wherever and whenever needed, (d) the book design is made more attractive so that it is interesting to read.

### c. Textbook Analysis Results

It is known that the textbooks that teachers and students often use. The social studies learning process is printed books published by the Ministry of Education and Culture entitled Social Science Class VIII for Junior High School / MTs. The results of the analysis of textbooks are based on aspects of presentation, material, approach, and evaluation. Regarding presentation, the social studies book published by the Ministry of Education and Culture provides access to books in digital and printed form. In the field of application, social studies books published by the Ministry of Education and Culture electronically have not been used by teachers in the face-to-face and non-face learning process. This is because the Ministry's electronic book is still in the form of text, making it less effective in learning.

The social studies book the Ministry of Education and Culture published uses a scientific strategy or approach outlined in discussing the material. Reading skills are highly emphasized in the social studies book published by the Ministry of Education and Culture, which is known based on the amount of material presented as a whole within the scope of ASEAN. Although students are encouraged to understand the material well at the end of learning, there are still limitations if the book is used for independent learning, namely the absence of the teacher's role in explaining the book's contents.

## 2. Design Stage

### a. Preparation for Material Content

In the junior high school curriculum structure, there are Core Competencies (KI) and Basic Competencies (KD) that students in the social studies learning process must achieve. Referring to the distribution of Basic Competencies (KD), researchers focus on the number of Basic Competencies (KD), namely (3.2) Analyzing the influence of social interactions in different spaces on social and cultural life and the development of national life. (4.2) Present the results of an analysis of the influence of social interactions in different spaces on social and cultural life and the development of national life. So based on the KD, the learning objectives by using the social studies e-

book will be achieved that students have the competence, among others: (a) able to explain the meaning of plurality, (b) able to explain the meaning of plurality for the Indonesian nation, (c) able to explain the plurality of religions in Indonesia, (d) able to explain the plurality of cultures in Indonesia, (e) able to explain the plurality of ethnic groups in Indonesia, (f) able to explain the plurality of livelihoods of Indonesian society, (g) able to show tolerance in the life of pluralistic Indonesian society.

b. Preparation of Learning Implementation Plan

Lesson plans are prepared concerning the syllabus and developed as a guide in implementing learning activities to achieve the essential competencies (KD) set on the material's content in the social studies e-book product. Prepared lesson plans contain the following elements: (a) school identity, (b) subject identity, (c) core competencies (KI) and essential competencies (KD), (d) indicators of competency achievement derived from essential competencies, (e) learning objectives that have been derived from indicators of competency achievement, (f) learning steps, (g) assessment techniques. The learning implementation plan (RPP) document is presented in the attachment.

c. Storyboard Outline

The e-book framework is prepared after determining the material's content to be presented in the social studies e-book so that the basic framework of the book, in general, will be known. The basic framework of the social studies e-book is designed to include three elements: (a) the beginning, (b) the content, and (c) the end.

d. Preparation of Assessment Instruments

1) Media expert assessment instrument

The media expert assessment instrument is shown to the person or expert competent in assessing the presentation and feasibility aspects of the existing graphic aspects in the social studies e-book concerning the instrument items declared feasible by the validator. Thirty-two questions can be assessed with four scales, namely (a) score 1 for very poor criteria, (b) score 2 for poor criteria, (c) score 3 for good criteria, and (d) score 4 for excellent criteria. Media experts can assess the social studies e-book analysis results by giving a correction mark (v) on one of the criteria assessed.

2) Material expert

The material expert assessment instrument is shown to people or experts who are competent in assessing the presentation of the material in the social studies e-book concerning the instrument items available and that have been declared feasible by the validator. There are two aspects assessed by material experts, namely aspects of content feasibility and feasibility of social studies e-book language. Both aspects of the assessment of the material are described into 33 question items and assessed using four scales, namely (a) score 1 for the criteria is inferior, (b) score 2 for the criteria is less good, (c) score 3 for the criteria is good, (d) score 4 for the criteria is excellent. Material experts provide an assessment of the results of the analysis on social studies e-book by giving a correction mark (v) on one of the criteria assessed.

### 3) Student and teacher responds

This instrument was prepared to determine the attractiveness of students' and teachers' responses to the developed social studies e-book. In the teacher response instrument, there are four aspects of assessment, including (a) content feasibility, (b) linguistic feasibility, (c) presentation feasibility, and (d) graphic feasibility. The four aspects are translated into 17 question items. They can be assessed with four scales, namely (a) score 1 for very poor criteria, (b) score 2 for poor criteria, (c) score 3 for good criteria, and (d) score 4 for excellent criteria. Teachers can provide an assessment of the analysis results on the social studies e-book by giving a correction mark (v) on one of the criteria assessed. Meanwhile, the student response instrument comprised 17 items using the assessment of "yes" and "no" answers. Both instruments, both teacher and student responses, have previously gone through the validation stage and were declared feasible by the validator.

### 3. Development Stage

#### a. E-Book development

The development of e-books is done by performing several steps, namely;

- 1) Looking for references to gather information from various relevant sources related to the material on the plurality of Indonesian society. The material coverage of the plurality of Indonesian society is elaborated into several sub-materials, including (a) the definition of plurality, (b) the meaning of plurality for the Indonesian nation, (c) religious plurality in Indonesia, (d) cultural plurality in Indonesia, (e) ethnic plurality in Indonesia, (f) the plurality of livelihoods of Indonesian society, (g) tolerance in the life of plural Indonesian society.
- 2) Compiling materials based on materials collected from various relevant and recent sources, then organizing and adjusting them to the design, layout, and grammar of the e-book.

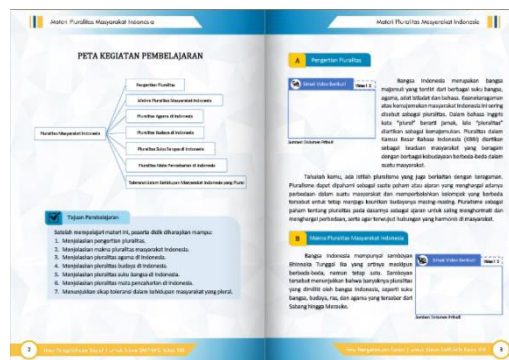


Figure 3. Material layout arrangement

- 3) Recorded learning videos that will be included in the e-book involving several people who act as models. The selection of several models aims to provide different nuances in each sub-matter so that students do not quickly feel bored and bored. In

addition, the quality of the video will also affect students' attractiveness, so the recording process was carried out at Studio Musapra to obtain maximum results.



Figure 4. The video recording process in Studio

- 4) Video editing with the Filmora version IX application as a follow-up to the previous video recording results is done so that the appearance of the learning video will be more attractive.

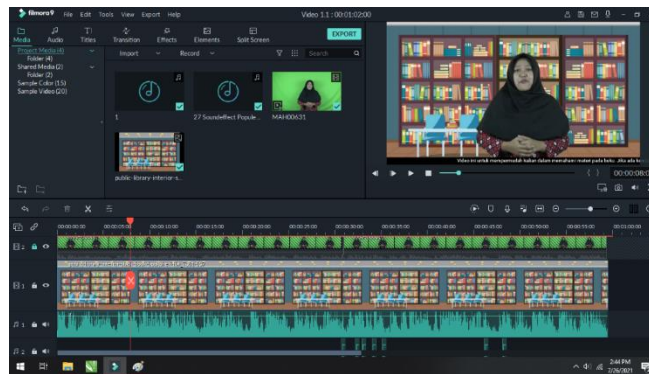


Figure 5. Video editing with *Filmora X*

- 5) Completing the product is done by combining the material with supporting elements of social studies e-books, including images, video, and audio, with the help of the application Flip Book Professional. After inputting supporting elements, the social studies e-book is completed, and then the product is stored in HTML format. The HTML file that has been saved is then uploaded to Google Drive and changed to the drive into the web format with the help of the web <https://drv.tw> as in the following figure. Social studies e-book development on the display of the main page, the chapter start page, video playback display, music/audio playback display, literacy corner display, and the final page display.



Figure 6. Image and Video Merging Process





Figure 7. Product finished

## b. Social Studies E-Book Development Results

### 1) Main Page Display of Social Studies E-Book

The main page of the social studies e-book is attractively designed by combining colors, images, and font types appropriate for the age of student development—a selection of blue and golden yellow colors to add a bright and elegant impression. The images on the home page display the diversity of Indonesian culture in line with the content of social studies e-book material about the plurality of Indonesian society. The selection of font types for book titles is also adjusted to be in harmony with the elements of images and colors. All these elements are combined into one attractive appearance to attract students to use social studies e-books. IPS e-book main page display can be seen in Figure 8.



Figure 8. Main Page Display of Social Studies E-Book

### 2) Chapter Start Page Display

The appearance of the chapter start page is designed to be attractive by combining elements of images, text, and introductory learning videos. The presentation of regional dance images on the left side of the e-book page aims to provide an identity of material related to the plurality of Indonesian society. The introductory text at the beginning of the chapter contains one explanatory paragraph to describe the scope of the material to be discussed. An introductory learning video is also presented to help students know the learning activities in each chapter. The three elements are placed in a propositional manner to attract students. The display of the chapter start page can be seen in Figure 9.



Figure 9. Chapter Start Page Display of Social Studies E-Book

### 3) Video Playback Display in IPS E-Book

Introductory learning videos are placed at the beginning of chapters and sub-materials to provide access to attention for students. Videos can be played according to students' learning needs. Videos played on a mobile phone will automatically appear on full screen, while if played on a computer device, they can be played on a small display or a full screen as needed. The video will also automatically stop if the book page is shifted so that the availability of this feature will facilitate students in understanding the material optimally. The video player display in the book can be seen in Figure 10.



Gambar 10. Video Playback Display in IPS E-Book

### 4) Music Playback Display in IPS E-Book

The music integrated into the IPS e-book contains a collection of regional music that illustrates the plurality of folk songs in Indonesia. Music is presented as a playlist or list of music by each region. A button feature on each regional music is

used to play and stop the music as needed. The size of the music button feature is also made rather large for easy use to facilitate student access. The display of music playback in social studies e-books can be seen in Figure 11.



Figure 11. Music Playback Display in IPS E-Book

### 5) Literacy corner view

The literacy corner contains supporting information about learning materials sourced from trusted websites. Apart from being used as supporting information, the literacy corner is also used to improve students' literacy skills. The literacy corner is presented in a separate column with a little explanation and website links according to the information needed. The cultural corner in the book can be seen in Figure 12.



Gambar 12. Literacy corner view

### 6) End Page Display of Social Science E-Book

At the end of the book is a quote from Gus Dur: "The difference that causes diversity is the reason for the existence of Indonesia. Without diversity, there is no Indonesia". The quote means that diversity is part of life in Indonesian society. Existing diversity must be accepted and addressed wisely by all Indonesian people so that a sense of unity and integrity. The existence of Gus Dur's quote sentence is also expected to encourage students' awareness to understand and maintain the diversity of Indonesia. IPS e-book final page display can be seen in Figure 13.



Gambar 13. End Page Display of Social Science E-Book

### **c. E-Book validation**

#### **1) Results of Product Validation by Material Experts**

Material validation on the development of social studies e-book products is carried out by material experts, namely, Dr. Material experts can provide product assessments with a range of scores with criteria: (a) score 1 for very poor criteria, (b) score 2 for poor criteria, (c) score 3 for good criteria, (d) score 4 for very good criteria. In addition, material experts also provide input, comments, or responses to the products developed in the column provided in the instrument. Product assessment by material experts includes two aspects, namely content feasibility and linguistic feasibility.

Based on the material expert's assessment, the content feasibility aspect obtained a total score of 49, and the linguistic feasibility aspect obtained a total score of 67. When the two aspects were added together, a total score of 116 was obtained. The number of scores obtained, if divided by the number of items, then obtained an average value of 3.86. Based on converting quantitative data to qualitative data, the average value of 3.86 is in the interval  $X > 3.04$ . So, based on the validation of the material expert assessment, it gets an A with Very Good criteria.

#### **2) Product Validation Results by Material Expert Assessment**

Product assessment by media experts includes two aspects: presentation feasibility and feasibility of graphics. The assessment of media experts in the questionnaire is then converted into assessment results, which show the value of the validation results. Data on the results of the assessment by media experts can be seen in the table below:

The assessment results from the media expert obtained a presentation feasibility score of 44 and a grammatical feasibility score of 68, resulting in a total score of 112. In obtaining the average assessment, the total score is divided by the number of question items so that the average score obtained is 3.50. Based on converting quantitative data to qualitative data, the average score is 3.50 in the interval  $X > 3.04$  with the value category A or Very Good criteria.

### 3) Teacher Respond Results

The teacher's response is given to the teacher who teaches the 8th-grade social studies subject, Haryanto, S. E. The teacher can provide an assessment of the product based on aspects of content feasibility, linguistic feasibility, presentation feasibility, and feasibility of graphics according to the range of scores with the criteria: (a) score 1 for very poor criteria, (b) score 2 for poor criteria, (c) score 3 for good criteria, (d) score 4 for excellent criteria.

The assessment results from the social studies teacher above show that the total score is 62. If the number of scores obtained is divided by the number of items, then the average value is 3.64. Based on converting quantitative data to qualitative data, the average value of 3.64 is  $2.68 < X \leq 3.04$ . So it is known that the teacher's response got a grade of B with suitable criteria.

### 4) Student Respond Results

The results of student responses were carried out through two stages, namely small-group response tests and large-group responses. The small group response was conducted on six students with achievement criteria: 2 with low achievement, 2 with medium achievement, and 2 with high achievement. The small group response test was conducted to obtain suggestions and responses from students before the product was used in the large group trial and effectiveness test. The small group response test was conducted on class VIII A SMP Muhammadiyah 1 Prambanan students.

According to the results of the student response test in the small group, response data was obtained with a total of 87. If converted into a percentage, a value of 85.29% was obtained. According to student responses, the percentage assessment of 85.29% is included in the interval 85% - 100% with a value scale of A, which is Good. The extensive group student response test to the social studies e-book was conducted simultaneously during the effectiveness trial. After students are given treatment using the social studies e-book, then given a questionnaire, students respond to the social studies e-book that has been developed. The student response instrument comprised 17 items with the answer options "yes" and "no". The assessment is based on aspects of content feasibility, linguistic feasibility, presentation feasibility, and feasibility of graphics. Based on student responses conducted in the large group trial with 28 respondents, the total score was 423 with a percentage value of 82.94%. The percentage in the range of 75%-84% in Table 8 shows that the student response to the developed social studies e-book has good criteria.

## 4. Implementation Stage

### a) Normality Test

Data sources for the normality test were obtained from the pretest and posttest of social studies learning. The normality test was conducted with the help of SPSS 21. There is a requirement that the data is declared normal if the index obtained by both Columnogrov-smirnov and Shapiro-wilk is  $P > 0.05$

(Nurgiyantoro, 2009). Based on the results of the analysis conducted with the SPSS program, the following data were obtained.

Table 1.  
*Normality Test Result*

		<b>Tests of Normality</b>					
		Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
perlakuan	n	Statistic	df	Sig.	Statistic	df	Sig.
nilai	pretest	.126	28	.200*	.958	28	.319
	posttest	.137	28	.190	.931	28	.065

\*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Based on Table 1 above, calculated with the help of SPSS, the data in the pretest column, Kolmogorov-Smirnova with a statistical index = 0.126, free degree (df) = 28, and Sig = 0.200, as well as the Shapiro-Wilk index with a statistical index = 0.958, free degree (df) = 268 and Sig = 0.319. In the posttest column, the Kolmogorov-Smirnova data was obtained with a statistical index = 0.137, free degree (df) = 28, and Sig = 0.190, as well as the Shapiro-Wilk index with a statistical index = 0.931, free degree (df) = 28, and Sig = 0.065. So, the significance values are both >0.05. So, the data tested both by the Kolmogorov-Smirnova and Shapiro-Wilk formulas, the variable score data distribution is declared normal.

b) Homogeneity Test

Uji homogenitas dilakukan dengan bantuan program SPSS. Terdapat syarat data dinyatakan homogen adalah apabila taraf signifikansi pada rata-rata penghitungan dinyatakan lebih besar dari 0,05 atau Sig > 0,05. Berdasarkan hasil pengolahan uji homogenitas, diperoleh data sebagai berikut.

Table 2.  
*Homogeneity Test Result*

		<b>Test of Homogeneity of Variances</b>			
		Levene			
		Statistic	df1	df2	Sig.
Value	Based on Mean	3.140	1	54	.082
	Based on Median	2.632	1	54	.111
	Based on the Median and with adjusted df	2.632	1	48.740	.111
	Based on trimmed mean	3.084	1	54	.085

Referring to the data processing results with the homogeneity test, the average count obtained includes Levene Statistic = 3.140, df1 = 1, df2 = 54, and Sig = 0.082.

Based on these data, it can be seen that the Sig value is more significant than 0.05 or  $0.151 > 0.05$ . Thus, the data is said to be homogeneous.

c) Hypothesis Test

Hypothesis testing in this study used a t-test for Paired Samples. This test is conducted to see whether or not there is a difference in the pretest and posttest test results. The hypothesis in this study is as follows:

Ho = There is no difference between the pretest and posttest.

Ha = There is a difference between the pretest and posttest.

Based on the data from the pretest and posttest test results that have been processed with the help of the SPSS application, the Paired Samples Statistics results are obtained as in Table 3 below.

Table 3.  
*Hypothesis Test Result*  
**Paired Samples Statistics**

	Mean	N	Std. Deviation	Std. Error Mean
Pair 1 pretest	46.4286	28	15.56689	2.94187
posttest	72.6786	28	11.82293	2.23432

Based on the table of Paired Samples Statistics calculation results, the pretest data with 28 respondents has an average of 46.42 with a Standard Deviation of 15.56, and the posttest data with 28 respondents has an average of 72.67 with a Standard Deviation of 11.82. After that, the t-count test calculation process is carried out with the data results as in Table 4 below.

Table 4.  
*t-Test Result*

		<b>Paired Samples Test</b>							
		Paired Differences							
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
					Lower	Upper			
Pair 1	pretest - posttest	-26.25000	18.39006	3.47540	-33.38092	-19.11908	-7.553	27	.000

According to the results of the t-test calculation in the table above, we can see that the t-count obtained is 7.553. The t table with degrees of freedom (n-1) 27 with a significance level of 1% is 2.771, and the significance value is 0.000, so that  $0.00 < 0.05$ . After the calculation, it can be seen that the count value is greater than the t-table, or it can be written  $t_{count} > t_{table}$  ( $7.553 > 2.771$ ), it can be said that

$H_0$  is rejected and  $H_a$  is accepted, meaning that there is a significant difference between the pretest and posttest.

## **5. Evaluation Stage**

Based on the assessment results conducted by material experts, media experts, teachers, and students, input for improving social studies e-book products that have been developed so that the product can be effectively used in supporting learning. Some input and improvements that have been made are as follows.

### a) Material Experts

Based on the results of validation obtained from the material expert, there is input for improvement, namely typos and punctuation errors, so that the sentence is better and according to PUEBI (General Guidelines for Indonesian Spelling).

### b) Media Expert

The results of media validation obtained input from experts, namely the addition of elements to the video explanation of the material and the addition of elements in question in the form of images, news, or information related to the material to give the impression of being exciting and not boring for students.

## **Conclusion**

1. developing a social studies e-book with a blended learning model includes collecting references, compiling materials, recording videos, editing and combining videos and materials, and the completion process to turn the e-book into a web page.
2. E-book IPS has been declared feasible based on the assessment of material experts, media experts, as well as student and teacher responses with the following assessment results:
  - a. After assessing the material experts, the social studies e-book obtained an average score of 3.86 with the eligibility criteria "Very Good."
  - b. Assessment of media experts, social studies e-book obtained an average score of 3.50 with eligibility criteria "Very Good."
  - c. The teacher's response to using social studies e-books obtained a percentage value of 3.64 with the eligibility criteria of "Very Good."
  - d. Students' responses to the e-book in small groups obtained a percentage value of 85.29% with the assessment criteria "Very Good," and student responses in large groups obtained a percentage value of 82.94% with the assessment criteria "Good."
3. The effectiveness of social studies e-books is measured by pretest and posttest to determine changes in grades before and after using social studies e-books. The completeness of student scores by the KKM of 65 changes with a percentage of 82.15% at the pretest stage to 82.15% of students reached KKM completeness. The t-test results showed that  $t\text{-count} = 7.553 > t\text{-table} = 2.787$  with degrees of freedom  $(n-1) 27$  and a significance level of 1%, so  $H_0$  is rejected, and  $H_a$  is accepted. Referring to the results of the product trial, it can be seen that the increase in student scores that completed the KKM and t-test resulted in a significant change in value. Then, the social studies e-book is declared effective.



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