Development of E-Modules for Elementary Students

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ABSTRACT

This research is a product development research of Flipbook-Based E-Module. Flipbook-based E-Modules can be interpreted as module teaching materials that are displayed using electronic media. This research aims to produce Flipbook-based E-Module products that meet practical and effective criteria. This study aims to develop a flipbook-based E-Module product using the Canva application and determine its feasibility (content components, language components, and presentation quality components), attractiveness and convenience as well as its effectiveness on students' concept understanding on chapter 7 subchapter material on buying and selling activities as one of the completions. This study also aims to determine the benefits of applying E-Modules for students in achieving completeness. The research approach used is a combination of one-group pretest-posttest design and ADDIE. The results showed that the development of flipbook-based E-Modules for learning social studies chapter 7 sub chapter c buying and selling activities as one of the fulfillment of the needs of fourth grade students of SD Katholik Don Bosko 1 Kupang has a quality achievement qualification obtained from the calculation of the average level of product validity of 84.75% with very valid qualifications, the level of media practicality of 87.95% with very practical qualifications, and the level of media effectiveness of 85% with very high/effective qualifications.

Keywords: E-Module; Flipbook; Development; Elemntary Student; Learning Achievement

INTRODUCTION

The learning process at the educational level, both at the primary and secondary education levels, needs renewal which in fact until now learning in schools has only been fixated on books and conventional modules. Many of the textbooks that have been used by schools do not meet the rules of education. The books used are only limited to information, there are even books and modules whose contents are in the form of questions and answers accompanied by reasoning answers. Such books do not provide opportunities for students to progress and develop.

In this case, researchers try to provide a different new nuance for the world of education, in this case the learning process at the elementary school level by making teaching materials in the form of *Flipbook-based* E-Modules in the teaching and learning process, especially learning S osial with the topic of buying and selling activities as one of the fulfillment of the needs of grade IV elementary school.

Based on observations and interviews with class IV homeroom teachers conducted by researchers at Don Bosko 1 Catholic Elementary School Kupang on October 18, 2022, it is known that the teaching materials used by teachers at Don Bosko I Catholic Elementary School Kupang still use thematic printed books and kartika books that have been provided by the school. In accordance with the results of an interview with one of the teachers at SD Katholik Don Bosko 1 Kupang also stated that learning still runs conventionally so that the learning process goes one way which results in students being engrossed in themselves such as rowdy in class, drawing, not even paying attention to the teacher in the classroom.

This is because in delivering material teachers do not use teaching materials or interesting media. So it tends to make students feel bored and reluctant to pay attention to the teacher's explanation. This happens because teachers are still struggling with books and have not optimized sources or other teaching materials that can provoke students' attention so that students focus on learning learning materials. Therefore it is very important for a teacher to create conducive learning conditions by designing good and fun learning for students.

Oneway to create an interesting learning atmosphere is to develop Flipbook-based E-Module teaching materials. One of the learning media that can be used in learning SOCIAL SCIENCES in the classroom is digital *Flipbook* media. *Digital flipbook* is a form of presenting independent learning materials that are arranged systematically into the smallest learning units, to be able to achieve certain learning

objectives presented in digital format in which there are multimedia and navigation elements that make users more interactive with the media. One of the learning materials that is suitable to be made into *Flipbook* learning media is buying and selling activities as one of the fulfillment of needs. The subject matter in grade IV elementary school is considered suitable because in its delivery pictures are needed in real life to increase students' understanding of the topic of buying and selling activities as one of meeting needs. The Flipbook media developed is a digital *Flipbook* media in which it contains features in the form of images in real life that explain the material of economic activity.

METHOD

The research conducted is a *Research and Development* (R&D) method. The research model used is the ADDIE model which consists of several stages, namely Analysis, Design, Development, Implementation, and Evaluation. Referring to data collection techniques, the types of data used are qualitative data and quantitative data. questionnaire instruments, tests and documentation studies.

To determine the practicality and effectiveness of the products developed, researchers compiled instruments that have been modified and adjusted to the needs of data collection in this study, namely: Table 1. Material Expert assessment indicators, Table 2. Media Expert assessment indicators, Table 3. Teacher Response Questionnaire Indicators, Table 4. Student Response Questionnaire Indicators

The practical analysis of *the Flipbook-based* E-Module is based on teacher response questionnaires and student response questionnaires. The data from this questionnaire were analyzed qualitatively and quantitatively. Quantitatively using the four-interval Likert scale. The assessment criteria for the response questionnaire are presented in the following table: Table 5. Assessment Criteria Response questionnaire. After obtaining percentage results, then grouped according to the criteria of product practicality presented in the following table: Table 6. Product Practicality Criteria.

Analysis of the effectiveness of *the Flipbook-based* E-Module developed by researchers using learning outcome test data. Data on the SOCIAL SCIENCES learning outcomes test in Chapter 7 topic C (buying and selling activities as one of meeting needs) were analyzed quantitatively. The abilities of students can be grouped based on standard categorization techniques set by Zainal Aqib (2011) which are presented in the following table: Table 7. Student Ability Categories

The statistical test is used to prove that the *Flipbook-based* E-Module product is able to achieve the goals that have been set. The measurement of the effectiveness and failure of the *Flipbook-based* E-Module product is carried out by comparing the *pretest* score with *the posttest* score. Some stages of statistical tests that must be carried out by researchers include:

1) Normality Test

This test serves to determine the distribution of respondent data is normally distributed or not. In this study, the normality test was carried out using *Kolmogorov Smirnov's* formula with the help of SPSS version 29. The test result data can be said to be normal if the significance value shows *a p-value* of > 0.05, which means that the data is no different from the normal curve of data distribution.

2) Homogeneity Test

This test is used for whether groups of respondents belong to the same population or not. So, one of the statistical techniques used to explain group homogeneity is variance (Sugiyono, 2010: 56). Both groups are said to be homogeneous when using a significance level of 5%, resulting in. Conversely, if it can be concluded that the data is not homogeneous. This homogeneity test can be done with the help of SPSS 16 with the calculation *of the test of homogenity of variance*. Based on the calculation of the average (mean), the hypothesis tested is:

H_0: The variance in each group is the same (homogeneous)

$H_{1:}$ The variance in each group is different (not homogeneous)

3_ Test the hypothesis

If the calculation data on the normality test shows that the data distribution is normal, then the statistical analysis used for the *Flipbook-based* E-Module effectiveness test uses parametric statistical analysis. Test the effectiveness of *Flipbook-based* E-Modules using a T-test (t-test) with the formula Paired Samples *T-Test* or if the data is normally distributed but not homogeneous then the test is with the formula *Independent Samples* T *Test.* All hypothesis tests can be performed with the help of the SPSS program. The research hypotheses are:

H_0: There is no difference in the average pretest and *posttest* scores

H_1: There is a difference in the average pretest and *posttest* scores

In the hypothesis test, if *the p-value* > 0.05 then $_{H0}$ is accepted and H1 is rejected. Conversely, if *the p-value* < 0.05 then $_{H1}$ is accepted and H0 is rejected. If H_1 is accepted, it means that the *Flipbook-based* E-Module can be a relevant alternative module for use in learning because it effectively makes learning outcomes in the content of SOCIAL SCIENCES Chapter 7 topic C (buying and selling activities as one of meeting needs).

Research Design

The second stage of this development research design began to be designed. Several steps need to be taken so as to produce output, namely (1) cover design, (2) making instructions for use, (3) compiling content/material, (4) making evaluation questions.

Participants

Observations and interviews with class IV homeroom teachers conducted by researchers at Don Bosko 1 Catholic Elementary School Kupang on October 18, 2022, it is known that the teaching materials used by teachers at Don Bosko I Catholic Elementary School Kupang still use thematic printed books and kartika books that have been provided by the school.

Data Collection Tools

The research conducted is a *Research and Development* (R&D) method. The research model used is the ADDIE model which consists of several stages, namely Analysis, Design, Development, Implementation, and Evaluation. Referring to data collection techniques, the types of data used are qualitative data and quantitative data. questionnaire instruments, tests and documentation studies.

To determine the practicality and effectiveness of the products developed, researchers compiled instruments that have been modified and adjusted to the needs of data collection in this study, namely (Table 1):

Assessment indicators are further development of indicators (indicators of competency achievement). Assessment indicators need to be formulated to serve as assessment guidelines for teachers, students and evaluators at school (Table 2).

Indicators of expert media assessment are further development of indicators (indicators of competency achievement) by experts in the form of questions that discuss about Content quality, Serving and Learning (Table 3).

Teacher Response Questionnaire Indicators contens questions submitted by expert who discuss about Feasibility of flipbook-based E-Modules in Learning, Appeal of flipbook-based E-Modules, and Efficiency of flipbook-based E-Modules (Table 4).

The practical analysis of *the Flipbook-based* E-Module is based on teacher response questionnaires and student response questionnaires. The data from this questionnaire were analyzed qualitatively and quantitatively. Quantitatively using the four-interval Likert scale. The assessment criteria for the response questionnaire are presented in the following in table 5:

For product practicality test analysis, the score obtained from the teacher's answer and student answer is then converted into a percentage using the following formula:

$$Vp = \frac{Tsp}{Tsh} \times 100$$

Table 3. Teacher Response Questionnaire Indicators

No.	Aspects	Number of Questions
1.	Feasibility of *flipbook-based* E-Modules in Learning	6
2.	Appeal of *flipbook-base*d E-Modules	5
3.	Efficiency of flipbook-based E-Modules	4
Total		15

Table 4: Student Response Questionnaire Indicators

No.	Aspects	Number of Questions
1.	Effectiveness of Using Flipbook-based E-Modules	7
2.	Appeal of *flipbook-based* E-Modules	3
Total		10

Table 1. Material Expert assessment indicators

No.	Aspects	Number of Questions
1.	Eligibility of Presentation of E-Modules	7
2.	Quality of E-Module Product Content	4
3.	E-Module Design	3
Total		14

Table 2: Media Expert assessment indicators

No.	Aspects	Number of Questions
1.	Content quality	8
2.	Serving	4
3.	Learning	3
Total		15

Table 5: Assessment Criteria Response questionnaire

Criterion	Score
Totally Agree	4
Agree	3
Disagree	2
Strongly Disagree	1

(Source: Akbar, 2013: 158)

Information:

vp = percentage value
Tsp = Total Respondent Answer Score
tsh = Total Max Score

After obtaining percentage results, then grouped according to the criteria of product practicality presented in the following in table 6:

To determine the effectiveness of the *Flipbook-based* E-Module developed, an analysis of the test results of test subjects was carried out. This *Flipbook-based* E-Module is said to be effective in the learning process when viewed from the success indicators of the process with a minimum level achieved, which is 75% of the number of students who take part in learning, and achieve MINIMUM COMPLETION RATE So that in this study, the learning outcomes of students who achieve MINIMUM COMPLETION RATE are used as indicators of success (IK).

To find out the percentage of student success indicators, the following formula is used:

$$IK = \frac{the\ number\ of\ students\ who\ achieve\ completeness}{total\ number\ of\ students} \times 100\%$$

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The statistical test is used to prove that the *Flipbook-based* E-Module product is able to achieve the goals that

Table 6: Product Practicality Criteria

No.	Practicality Criteria	Level of practicality
1.	85,01% - 100%	Very Practical
2.	70,01% - 85,00%	Practical
3.	50,01% - 70,00%	Less Practical
4.	01,00% - 50,00%	Impractical

(Source: Akbar, 2013: 82)

Table 7: Student Ability Categories

No.	Level of Achievement	Category
1.	81% – 100%	Very Good
2.	61% – 80%	Good
3.	41% – 60%	Enough
4.	21% – 40%	Less
5.	< 20 %	Less Than Once

(Source: Aqib et al, 2011)

have been set. The measurement of the effectiveness and failure of the *Flipbook-based* E-Module product is carried out by comparing the *pretest* score with *the posttest* score. Some stages of statistical tests that must be carried out by researchers include:

4) Normality Test

This test serves to determine the distribution of respondent data is normally distributed or not. In this study, the normality test was carried out using *Kolmogorov Smirnov's* formula with the help of SPSS version 29. The test result data can be said to be normal if the significance value shows *a p-value* of > 0.05, which means that the data is no different from the normal curve of data distribution.

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If the calculation data on the normality test shows that the data distribution is normal, then the statistical analysis used for the *Flipbook-based* E-Module effectiveness test uses parametric statistical analysis. Test the effectiveness of *Flipbook-based* E-Modules using a T-test (t-test) with the formula Paired Samples *T-Test* or if the data is normally distributed but not homogeneous then the test is with the formula *Independent Samples* T *Test*. All hypothesis tests can be performed with the help of the SPSS program. The research hypotheses are:

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SCIENCES Chapter 7 topic C (buying and selling activities as one of meeting needs).

Data Collection

To determine the practicality and effectiveness of the products developed, researchers compiled instruments that have been modified and adjusted to the needs of data collection in this study.

Data Analysis

The research conducted is a Research and Development (R&D) method (Sugiyono, 2013). The research model used is the ADDIE model which consists of several stages, namely Analysis, Design, Development, Implementation, and Evaluation. Referring to data collection techniques, the types of data used are qualitative data and quantitative data. questionnaire instruments, tests and documentation studies.

Findings

Funding for my articles will be done personally, I am a lecturer in Pancasila Education and Citizenship at Nusa Cendana University and the need to publish this article is done to meet the requirements to become a Professor.

Discussion

This research has produced a product in the form of a Flipbook-Based E-Module containing SOCIAL SCIENCES Chapter 7 Topic C Buying and Selling Activities as One of Fulfillment of Needs. The development model in this study adopts the ADDIE model which includes five stages, namely analysis, design, developme nt, implementation, and evaluation. Some of the stages are described in detail as follows:

Analysis Stage

The first stage, at this stage is in the form of an analysis related to the needs needed to obtain relevant information. These needs are related to material selection, determining the user (user), and software assistance used to develop Flipbook-

based E-module applications. First, the selection of material to be delivered in the Flipbook-based E-module, namely Buying and Selling Activities. The reason for choosing material is based on the difficulties often experienced by learners in learning. Second, the target users of Flipbook-based E-module are grade IV elementary school students. Finally, the selection of software assistance used to create E-Modules is Canva and Heyzine. Thechoice of software has the reason that it is able to support the display of text, video, images, and other navigation. In addition, the features available in the software are quite supportive.

Design Stage

The second stage of this development research design began to be designed. Several steps need to be taken so as to produce output, namely (1) cover design, (2) making instructions for use, (3) compiling content/material, (4) making evaluation questions.

Development Stage

The third stage is the development of Flipbook-based modules, Flipbook-based module applications that have been made are then tested for validity by several experts, before being applied and tested on students. The validity test aims to know the feasibility assessment of the Flipbook-based module developed. Feasibility assessment is obtained in terms of material feasibility and media feasibility. Validators as parties who assess Flipbook-based modules consist of two people, namely material expert validators and media expert validators. The validation results that have been assessed by material and media expert validators are presented in table 8.

Based on the existing table, recapitulation data obtained the percentage of validity in four aspects to test the level of product validity, the results were obtained, namely the average percentage of aspects of the quality of the contents of Flipbook-based E-Modules of 82.5% with the category "Valid", the average aspect of presenting Flipbook-based E-Modules was 87.79% with the category "Very Valid", the average percentage of aspects of designing *Flipbook-based*

Table 8: Expert Team Validation Recapitulation

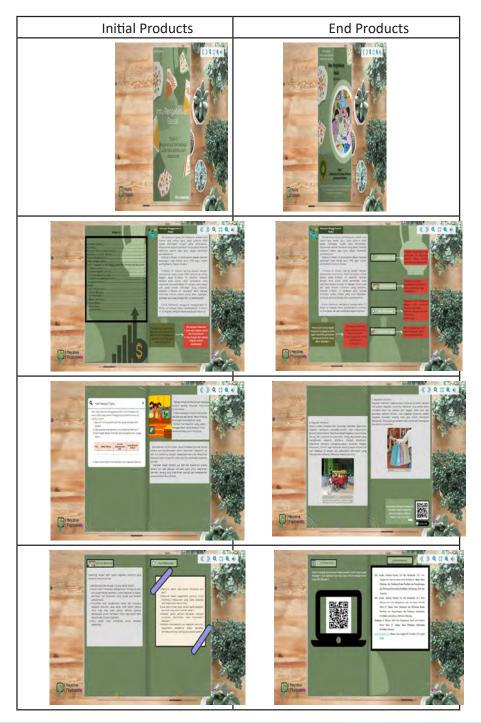| No	Validators	Assessment Aspect Percentage			
		Content Quality	Serving	Design	Learning
1	Material Expert	85%	90%	-	86,67%
2	Media Expert	80%	85,57%	80%	-
Average		82,5%	87,79%	80%	86,67%
Percentage of Validity		84,75%			
Validity Categories		Strongly Agree/Very Valid			

Source: Research Data (processed data)

E-Modules only assessed by media experts and received a percentage score of 80% with the "Valid" category, and the average percentage for aspects of learning using Flipbook-based E-Modules which were only assessed by material experts received a percentage score of 86.67% with the theory "Very Valid".

The results of the validity test from the two experts, obtained the final result, namely the average percentage for the four aspects of 84.75% adjusted to the Social Science

Qualification Standards (in table 3.8) included in the "Very Valid" category. So it can be concluded that the *Flipbook-based* E-Module developed by the researcher is very valid for use in learning SOCIAL SCIENCES in grade IV SD Chapter 7 Topic C buying and selling activities as one of the fulfillment of needs.

Here is a view of mobile-based modules that have gone through a revision process based on the input and assessment of each expert.

Initial Products	End Products

Implementation Phase

The fourth stage is implementing development products that have previously gone through several processes by applying to users. Products in the form of Flipbook-based E-Modul will be divided into 2 stages (small and large scale trials) in grade IV elementary school.

The small-scale trial involved 10 students. These test subjects were randomly selected. Small group trials were carried out in 2 meetings. At the first meeting, *a pretest* was given to find out students' understanding of the material. And from the *existing pretest* results, researchers recapitulate students' test scores, and it was found that students' overall test scores did not reach the Minimum Completeness Criteria (MINIMUM COMPLETION RATE). So, the next step for researchers to do learning is using the Flipbook-based E-Module that the researcher has compiled. After going through various activities in learning, students are given a follow-up test, which is in the form of a *posttest*. Then the test results are recapitulated by the researcher to be used as research data which will then be analyzed.

In a large-scale trial, researchers involved all 20 grade IV students. Large group trials were conducted in 2 meetings. At the first meeting, *a pretest* was given to find out students' understanding of the material. And from the *existing pretest* results, researchers recapitulate students' test scores, and it was found that the average students' overall test scores still did not reach the Minimum Completeness Criteria (MINIMUM COMPLETION RATE). So, the next step for researchers to prepare the same learning is to use the Flipbook-based E-Module that the researcher has prepared. After going through various activities in learning, students are given a follow-up test, which is in the form of a *posttest*. In addition to doing the *posttest,* students and teachers were also asked for their willingness to fill out a response questionnaire to assess the practicality of the product. Then, the test results

and questionnaire results are recapitulated by the researcher to be further used as research data to be analyzed to obtain a research study.

The success of the implementation of both trials will be seen from the results of the practicality and effectiveness analysis. The following will describe the results of the analysis of the entire implementation of the trials that have been carried out.

The following will be presented the average percentage of practicality level of teachers and students of grade IV (Table 9):

From the table 9, we can know that the average percentage of the two test subjects, namely teachers and students, was 87.95% with the category of practicality level, namely "Very Practical". So that the products developed by researchers can be said to be practically used in learning SOCIAL SCIENCES chapter 7 topic c buying and selling activities as one of the fulfillment of needs in grade IV of SD Katolik Don Bosko 1 Kupang, both for teachers and students.

After getting the level of practicality, the researcher will also present the effectiveness data of the product developed by the researcher. Measurement of whether or not the product is effective is done by comparing the *pretest* score with *the posttest* score. The statistical descriptive data of *pretest* and *posttest* results in large-scale trials are as follows:

Based on the data in the table above, the *average pretest* score is 58.75, if adjusted to the table of student ability categories, it is included in the "Medium" category because even though most students do not reach MINIMUM COMPLETION RATE there are still students who reach MINIMUM COMPLETION RATE.   Then, the average *posttest* score increased to 74.75 and included the "High" category.

From a total of 20 students as research subjects, it is known that 17 students achieved completion, but 3 other students have not achieved completion. Therefore, the percentage of student completeness can be calculated as follows:

So, a completeness percentage of 85% is obtained. In accordance with the student ability category table, the

Table 9: Recapitulation of Practical Response Questionnaire Results

No	Validators	Percentage	Level of practicality
1	Class IV Teacher	100%	Very Practical
2	Grade IV Students	75,9%	Practical
Average		87,95%	Very Practical

Source: Research Data (processed data)

$$Completeness = \frac{Number\ of\ students\ Reaching\ KKM}{number\ of\ student\ taking\ the\ test} \times 100\%$$

$$= \frac{17}{20} \times 100\%$$

$$= 85\%$$

Table 10: Descriptive Data of Test Results

Test Type	Number of Subjects (N)	Mean	Completion Percentage	Categories Completeness
Pretest	20	58,75	-	Keep
posttest	20	74,75	85%	Tall

Source: Research Data (processed data)

percentage of completion of grade IV of SD Katholik Don Bosko 1 Kupang is included in the "High" category. So, this category meets the requirements for classical learning completeness where at least 80% of students achieve MINIMUM COMPLETION RATE. So it can be concluded that the requirements for the effectiveness of the *Flipbook-based* E-Module developed in the research have been achieved.

In research on assessing the effectiveness of *Flipbook-based* E-Modules, in addition to analyzing success indicators. Theresearchers also conducted statistical analysis on pretest and posttest result data using a uantitative research design *pre-experiment one group pretest-posttest*. Analysis can be calculated through several statistical tests as follows:

1) Normality Test

Normally distributed. This is indicated by the value of Asymp. Sig. (2-tailed) of 0.200. This means that the test significance

Table 11: Normality Test Results

One-Sample Kolmogorov-Smirnov Test

			Unstandardd Residu:
N			
Normal Parameters[a,b]	Mean		.0000
	Std. Deviation		2.76711
Most Extreme Differences	Absolute		.
	Positive		.
	Negative		-.
Test Statistic			.
Asymp. Sig. (2-tailed)[c]			.2
Monte Carlo Sig. (2-tailed)[e]	Sig.		.
	99% Confidence Interval	Lower Bound	.
		Upper Bound	.

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.
d. This is a lower bound of the true significance.
e. Lilliefors' method based on 10000 Monte Carlo samples with starting seed

value Based on table 4.11, the normality test results from a sample of 20 data obtained the result that Kolmogorov Smirnov's Normality data is greater than 0.05 so that it is concluded that the research data is no different from the normal curve of data distribution (Table 11).

2) Homogeneity Test

Table 12. Homogeneity Test Results

Test of Homogeneity of Variance

		Levene Statistic	df1	df2	Sig.
Hasil Belajar IPS	Based on Mean	1.829	1	38	.184
	Based on Median	1.621	1	38	.211
	Based on Median and with adjusted df	1.621	1	34.681	.211
	Based on trimmed mean	1.859	1	38	.181

Based on the table 12 above, it is known that the value of Sig. Based on Mean for omogeny learning outcomes of SOCIAL SCIENCES is 0.184. Since the values of Sig. 0.184 > 0.05, it can be concluded that the variance of data on learning outcomes of SOCIAL SCIENCES in small and large-scale trials is omogeny. This means that the group of respondents comes from the same population (Table 13).

2) Test the hypothesis

Table 13: Hypothesis Test Results

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre Test	58.75	20	8.867	1.983
	Post Test	74.75	20	6.382	1.427

Paired Samples Test

		Paired Differences							Significance	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper	t	df	One-Sided p	Two-Sided p
Pair 1	Pre Test - Post Test	-16.000	4.168	.932	-17.950	-14.050	-17.169	19	<.001	<.001

Table 9 shows a summary of descriptive statistical results from the two samples studied, namely *pretest* and *posttest* values. For *pretest* scores, the average learning outcome or Mean was 58.75. As for the *posttest* score, the average learning outcome or Mean was 74.75. The number of respondents used as a research sample was 20 people. The Standard Deviation value on the *pretest* is 8.867 and *the posttest* is 6.382. Because the Mean pretest (458.75) < posttest (74.75) scores, it means that descriptively there is a difference in the average learning outcomes between *the pretest* and *posttest*.

Based on the table of results above, it is known that the value of Sig. (2-tailed) is 0.001 < 0.05, then Ho is rejected and H1 is accepted. So it can be concluded that there is an average difference between *pretest* and *posttest* learning outcomes. This means that there is an influence on the use of Flipbook-based E-Modules in learning SOCIAL SCIENCES Chapter 7 Topic C Buying and Selling Activities as One of the Fulfillment of Needs in grade IV of Don Bosko Catholic Elementary School 1 Kupang.

CONCLUSION

In this study, researchers produce products in the form of Flipbook-Based E-Modules that are relevant to be used in learning SOCIAL SCIENCES Chapter 7 Topic C Buying and Selling Activities as One of the Fulfillment of Needs. The development of diorama media in this study uses the ADDIE model with five stages, namely the analysis stage, the design stage, the development stage, the implementation stage and the evaluation stage i. Based on the research and development that has been passed by researchers, it can be concluded as follows: (1) The results of validation from material experts on *Flipbook-Based* E-Modules which developed got a percentage of 86.67% which means Very Valid/Strongly Agree.

Furthermore, the results of media expert validation of the *developed Flipbook-Based E-Module* got a percentage of 82.29% which means Very Valid / Strongly Agree. So, the *Flipbook-Based E-Module* developed is suitable for use in learning SOCIAL SCIENCES Chapter 7 Topic C Buying and Selling Activities as One of the Fulfillment of Needs in grade IV of SD Katholik Don Bosko 1 Kupang. Based on the validation results of two expert validators, an average percentage of 84.75% was obtained. Flipbook-Based E-Modules are already relevant to teaching materials with good design. The results obtained are categorized as "very valid" in the development of Flipbook-Based E-Modules as teaching materials for learning SOCIAL SCIENCES. (2) The results of the teacher response questionnaire to the Flipbook-Based E-Module got a percentage of 100% which means it is very practical. Furthermore, the recapitulation of the results of the student response questionnaire got a percentage of 75.9% which means practical.

The results of the teacher and student response questionnaire showed a percentage result of 87.95% which showed very practical answers. This answer shows that the *developed Flipbook-Based E-Modules* can make it easier for students to understand the material and be practical for use in learning SOCIAL SCIENCES. (3) The results of statistical data analysis of media effectiveness using paired Samples t-test obtained Sig. 0.00 1 < 0.05 values so that the research hypothesis accepted H1: there is an average difference between *pretest* and *posttest*. In addition, the effectiveness that the *Flipbook-Based* E-Module is also obtained from the classical completeness percentage is 8.5% which means that the student's ability is high. The effectiveness of the test results of grade IV students reached an average score of 70.88. Based on the results of the recapitulation, the effectiveness of diorama media includes the "high" criterion. (4) Based on the results of the study, students in the class that used the e-module reached a completeness of 85%, where 17 out of 20 students reached completeness.

SUGGESTION

In this study, researchers evaluate the implementation of trial research to measure the achievement of development goals. After researchers evaluated student learning outcomes, it was found that students' grades after using the product were better and almost all students had reached MINIMUM COMPLETION RATE. So, researchers can conclude that the *Flipbook-based* E-Module product has been able to be a solution in overcoming learning problems SOCIAL SCIENCES in Chapter 7 Topic C of buying and selling activities as one of the fulfillment of needs in grade IV elementary school.

LIMITATION

This research was conducted on Don Bosco Catholic High School students in Kupang, Indonesia. The book intended in this study is used only for information, there are even books and modules whose contents are in the form of questions and answers accompanied by reasoning and answers. so the limitations in this study are only students.

REFERENCES

Book

Aqib, Z., Jiyaroh S., Diniati E., &; Khotimah, Khusnul. 2011. *Classroom Action Research For Elementary, Elementary and Kindergarten Teachers*. Bandung: Yrama Widya.

Kadir. 2016. *Applied Statistics: Concepts, Examples, and Data Analysis with SPSS Program*. Jakarta: PT Raja Grafindo Persada.

Personal, Benny A. 2016. *Design and Development of Competency-Based Training Program for ADDIE Model Implementation*. Jakarta: Prenada Media Group.

Riduwan. 2013. *Basics of Statistics*. Bandung: Alfabeta.

Sugiyono. 2013. Data *Analysis Methods*. Bandung: Alfabeta.

Sugiyono. 2016. *R&D development methods.* Bandung: Alfabeta.

Sugiyono. 2009. *Quantitative, Qualitative, and R&D Research Methods.* Bandung: Alfabeta.

Sugiyono. 2010. *Statistics for Research.* Bandung: Alfabeta.

Journal Article

Amirullah, G., Hardinata, R., & Biologi, S. P. (2017). Pengembangan mobile learning bagi pembelajaran. Jurnal Kesejahteraan Keluarga Dan Pendidikan, 4(2), 97–101.

Anjani, K, D., Fatchan, A., & Amirudin, A. (2016). Pengaruh pembelajaran berbasis turnamen dan games terhadap motivasi belajar siswa. Jurnal Pendidikan: Teori, Penelitian, Dan Pengembangan, 1(9), 1787–1790.

Asrial, A., Syahrial, S., Kurniawan, D. A., Subandiyo, M., & Amalina, N. (2019). Exploring obstacles in language learning among prospective primary school teacher. International Journal of Evaluation and Research in Education, 8(2), 249–254. https://doi.org/DOI:10.11591/ijere.v8i2.16700

Astalini, A., Kurniawan, D. A., & Sumaryanti, S. (2018). Sikap siswa terhadap pelajaran fisika di sman kabupaten Batanghari. JIPF (Jurnal Ilmu Pendidikan Fisika), 3(2), 59–64.

Astalini, A., Kurniawan, D. A., Sulistiyo, U., Perdana, R., & Susbiyanto, S. (2019). E-assessment motivation in physics subjects for senior high school. International Journal of Software Engineering & Applicationsof Online and Biomedical Engineering (IJOE), 15(11), 4–15.

Atmowardoyo, H. (2018). Research methods in TEFL studies: Descriptive research, case study, error analysis, and R & D. Journal of Language Teaching and Research, 9(1), 197-204.

Azizah, U., & Nasrudin, H. (2014). Pemberdayaan kecakapan berpikir siswa SMA bertaraf internasional melalui pengembangan perangkat pembelajaran materi redox reaction berorientasi

group investigation cooperative. Jurnal Pendidikan Dan Pembelajaran, 20, 141-151. Retrieved from www.scopus.com

Basthomi, Y. (2007). Learning from the discursive practice of reviewing and editing: English research article published in Indonesia. Jurnal Pendidikan Dan Pembelajaran, 14(1), 65-74. Retrieved from www.scopus.com

Branch, R. M. (2009). Instructional design: The ADDIE approach (Vol. 722). Springer Science & Business Media

Budiana, H. R., Sjafirah, N. A., & Bakti, I. (2015). Pemanfaatan teknologi informasi dan komunikasi dalam pembelajaran bagi para guru Smpn 2 Kawali desa citeureup kabupaten ciamis. Dharmakarya, 4(1), 59–62.

Demitra, & Sarjoko. (2014). Penerapan model pembelajaran kooperatif handep pada materi pangkat rasional di SMAN-3 palangka raya. [the implementation of handep cooperative learning model on rational exponent in SMAN-3 palangka raya]. Jurnal Pendidikan Dan Pembelajaran, 21(1), 48-60. Retrieved from www.scopus.com

Demitra, Sarjoko, & Uda, S. K. (2012). Pengembangan model pembelajaran kooperatif handep untuk pembelajaran. Jurnal Pendidikan Dan Pembelajaran, 19, 15. Retrieved from www.scopus.com

Dwiyogo, W. (2014). Analisis kebutuhan pengembangan model rancangan pembelajaran berbasis blended learning (PBBL) untuk meningkatkan hasil belajar pemecahan masalah. Jurnal Pendidikan Dan Pembelajaran, 21, 71-78. Retrieved from www.scopus.com

Ekosusilo, M. S. (2014). Faktor dominan yang memengaruhi motivasi kerja, kinerja, dan keiuasan kerja guru SMA. Jurnal Pendidikan Dan Pembelajaran, 21(2), 138-139. Retrieved from www.scopus.com

Fahyuddin. (2015). Exploring students' reasoning abilities through structured chemical problem-solving. Jurnal Pendidikan Dan Pembelajaran, 22, 151-161. Retrieved from www.scopus.com

Gunawan, G., Setiawan, A., & Widyantoro, D. H. (2013). Model virtual laboratory fisika modern untuk meningkatkan keterampilan generik sains calon guru. Jurnal Pendidikan Dan Pembelajaran, 20(1), 25-32. Retrieved from www.scopus.com

Gunawan, I. (2017). The implementation of lesson study-based learning management and the effect toward students' activeness in lecturing. Jurnal Pendidikan Dan Pembelajaran, 24(2), 51-63. Retrieved from www.scopus.com

Gusfarin, R., Tomo, D., & Haratua, T. M. (2014). Jurnal Pendidikan Dan Pembelajaran, 3 Retrieved from www.scopus.com

Halim, A., Subhan, T. M., & Halim, L. (2008). The influence of classical mechanics concepts on the students' understanding of quantum mechanics": Atomic models. Jurnal Pendidikan Dan Pembelajaran, 15, 107-111. Retrieved from www.scopus.com

Halim, A., Subhan, T. M., & Halim, L. (2011). Pengembangan modul pembelajaran mandiri berbasiskan perubahan konseptual radikal. Jurnal Pendidikan Dan Pembelajaran, 18, 127-132. Retrieved from www.scopus.com

Hamid Al, F. (2019). Developing pure cartoon for stoichiometry concept combined with guided inquiry to improve process skill and students'

learning outcome. Jurnal Pendidikan Dan Pembelajaran, Retrieved from www.scopus.com

http://repository.radenintan.ac.id/20487/

https://eprints.umm.ac.id/46169/4/BAB%20III.pdf

Ipon, Depi. 2015. Application of the Stad Type Cooperative Learning Model to Improve Student Learning Activities in Social Science Subjects at Madrasah Ibtidaiyah Az-Zahir Palembang. SkrSocial Sciences i. Uin Raden Fatah Palembang. http://eprints.radenfatah.ac.id/1374/ accessed on Monday, October 17, 2022

Isrokatun, I. (2017). Improving mathematical creative problem-solving skills of male and female students through situation-based learning. Jurnal Pendidikan Dan Pembelajaran, 24, 42-50. Retrieved from www.scopus.com

Jailani, J., & Retnawati, H. (2016). Keefektifan pemanfaatan perangkat pembelajaran berbasis masalah untuk meningkatkan HOTS dan karakter siswa. Jurnal Pendidikan Dan Pembelajaran, 23(2), 111-123. Retrieved from www.scopus.com

Kamdi, W. (2010). Implementasi project based learning di sekolah menegah kejuruan. Jurnal Pendidikan Dan Pembelajaran, 17(1), 98-112. Retrieved from www.scopus.com

Kristantp, Y. E. (2015). Pengaruh model pembelajaran inkuiri terbimbing terhadap kemampuan berpikir kritis dan hasil belajar IPA siswa kelas VII SMP. Jurnal Pendidikan Dan Pembelajaran, 22, 197-208. Retrieved from www.scopus.com

Mairing, J. P., Budayasa, I. K., & Juniaiti, D. (2011). Profil pemecahan masalah peraih medali OSN. Jurnal Pendidikan Dan Pembelajaran, 18, 65-71. Retrieved from www.scopus.com

Mairing, J. P., Budayasa, I. K., & Juniati, D. (2012). Jurnal Pendidikan Dan Pembelajaran, 18, 57. Retrieved from www.scopus.com

Murdiana, I. N., & Lefrida, R. (2019). A developmental study of junior high school mathematics instructional media guided from humanity-value of learning model (MPNK) to prevent juvenile. Jurnal Pendidikan Dan Pembelajaran, Retrieved from www.scopus.com

Parjanadze, N. (2009). Globalisation theories and their effect on education. IBSU Scientific Journal, 3(2), 77–88.

Putro, S. C., Elmunsyah, H., Putranto, H., & Nidhom, A. M. (2017). Pengaruh Aspek Sosial Psikologis Terhadap Kesiapan Menjadi Guru Smk Di Jurusan TE FT UM. Teknologi Dan Kejuruan: Jurnal Teknologi, Kejuruan, Dan Pengajarannya, 40(1), 59–68.

Ratminingsih, N. M. (2018). Implementasi board games dan pengaruhnya terhadap hasil belajar bahasa Inggris. Jurnal Ilmu Pendidikan, 24(1), 19–28.

Sampurno, P. J., Maulidiyah, R., & Puspitaningrum, H. Z. (2015). Implementasi kurikulum 2013: Moodle (modular object oriented dynamic learning environment) dalam pembelajaran fisika melalui lembar kerja siswa pada materi optik di Sma (halaman 54 sd 58). Jurnal Fisika Indonesia, 19(56), 54–58.

Saparina, Mutiara, et al. 2017. The feasibility of digital flipbooks as learning media in circle material in grade VIII junior high school. Journal. Untan.

Sari, I. P. (2018). Implementasi model addie dan kompetensi kewirausahaan dosen terhadap motivasi wirausaha mahasiswa. Jurnal Ekonomi Pendidikan Dan Kewirausahaan, 6(1), 83–94.

Sari, Multia Nanda, et al. 2022. *Development of fluid e-modules for students' concept understanding using the Flip Pdf Professional application*. Journal of Study Results, Innovation, and Applications of Physics Education.

Sari, W. (2017). Pengembangan modul elektronik berbasis 3d page-flip professional pada materi konsep dasar fisika inti dan struktur inti mata kuliah fisika atom dan inti. EduFisika.

Sugianto, D., Abdullah, A. G., Elvyanti, S., & Mula-di, Y. (2013). Modul virtual: Multimedia flipbook dasar teknik digital. Innovation of Vocational Technology Education, 9(2).

Sugiyono, D. (2013). Metode penelitian pendidikan pendekatan kuantitatif, kualitatif dan R&D.

Susanti, F. (2015). Pengembangan e-modul dengan aplikasi kvisoft flipbook maker pada pokok bahasan fluida statis untuk peserta didik Sma/Ma kelas x. UIN.