THE DEVELOPMENT OF INTERACTIVE FLIPBOOK-FORMED TEACHING MATERIAL TO IMPROVE THE OF GRADE 4 STUDENTS' SOCIAL SCIENCE LEARNING OUTCOMES

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Abstract

Social studies learning outcomes for some students have not yet reached the KKM (Minimum Score Criteria), this is influenced by the limited teaching materials and the use of less optimal learning media. This research was a type of development research. This study was aimed to develop flipbook teaching materials, to test the feasibility of flipbook, test materials and the effectiveness of flipbook as teaching materials. The subject of this research was the fourth grade students of SDN Kandri 01 Semarang city, Central Java. In this study, researchers used saturated sample technique with a total of 42 students. The Data was collected by observation techniques, interviews, questionnaires, tests and documentation. Researchers processed data using product data analysis, early data analysis, t test, and gain test. The results showed that the flipbook material was very feasible to use with the percentage expert material assessment of 87.5%, media experts of 87.5% and linguists 75%. Based on learning outcomes there was an average difference through the t test of 7,113 and the average increase of 0,349 with medium criterion. As conclusion, the flipbook teaching materials was very feasible and effective for helping the student to learn about IPS Subject.

Keywords: teaching materials, flipbook, social science (IPS)

1. Introduction

Education is a way to ameliorate the quality of life, to build high quality human resources by ameliorating their aptitude, skill, and attitude. It is pursuant to *Undang-Undang Nomor 20 Tahun 2003 Bab 1, Pasal 1, Ayat 1* (Government Ordinance No.20, 2003 Chapter 1 Article 1 Section 1) on National Education System which states that education is a conscious and systematic way to create learning atmosphere and learning process in order that the students actively develop their own potentials to hold spiritual and religious power, self-control, high intelligence, good personality, good attitude, as well as the skill they require for themselves, community, nation, and the state. (Sisdiknas, 2003).

Peraturan Pemerintah Nomor 32 tahun 2013 Pasal 77I tentang Standar Nasional Pendidikan (Government Ordinance No.32, 2017 Article 771 on National Standards of Education) states that one of the subjects which is obliged to deliver in Primary School is Social Science subject. In Social Science we study the phenomena, facts, concepts, and generalization regarding social issues. In primary school degree, Social Science subject consists of Geography, History, Sociology, and Economics. By studying Social Science, the students are led to become democratic, responsible, and peace-loving citizen. The Social Science learning is designed to enhance the knowledge, understanding, and analytical skill about social conditions. (BSNP, 2006). Meanwhile, as stated by Sumaatmaja (quoted by Sardiman, 2014:143) Social Science is defined as a subject studying interrelationship between social and humanities fields in relation to social issues and phenomena in social community.

The learning objectives and scopes have been formulated in order to be suitable for the education advance. In fact, however, we can still find numerous problems related to Social Science learning in Indonesia. Based on the discussions on seminars and workshops on Social Science learning problem in primary school, it is found that Social Science learning generally is less attractive or boring. The Social Science subject has been regarded as insignificant and monotonous as it seems to prioritize merely memorization of the materials. It was stated in a journal by Putri and Widihastrini (2014:10) that unvaried learning, e.g. insufficient learning tools usage, also obstructs the students to focus and does not stimulate their creativity.

Every teaching tool has its own characteristics. So in terms of choosing the teaching tool, we need to consider the field needs and conditions (Falahudin, 2014). Kustandi and Sutjipto (quoted in Kartikasari 2017: 28) stated, teaching tool should contain the message which teacher intends to deliver to the students in the learning process. The

function of media as learning tool is that it can help the students focus, memorize, can lessen verbal teaching, and can better the students' understanding to take part in discussions (Samiha, 2017).

Based on the pre-research data I collected from interviews, filled questionnaire, observations, and documents containing students' Social Science learning outcomes in SDN Kandri 01 I find that Social Science learning outcomes are poor. The insufficient learning sources and tools made the teacher find additional sources. That kind of problem is confirmed with data containing Social Science learning outcomes. Scrutinized from grade IV students' Social Science learning outcomes throughout odd semester, I find that it tends to be poor and does not meet the determined Minimum Mastery Grades (KKM). In SDN Kandri 01 it has been determine that KKM is 67. Out of 42 students, 24 (57%) didn't meet KKM while 18 (43%) did. Based on the description above, I find that the learning sources are still insufficient and technology is rarely used during the learning. Therefore, I would like to develop interactive flipbook-assisted textbook in the Social Science learning particularly economic activities lesson for grade IV students in SDN Kandri 01.

As stated by Rasiman (2015:538) Flipbook maker is software designed to convert PDF files to digital versions. This software is used to create interactive textbook. As stated by Prastowo (2015:330) interactive teaching material is the one that combines several interactive learning tools (audio, videos, texts, or graphics) to manage an order or natural acts of a presentation. The technology development of digital book can drive the integration between printed and computerized technologies during the learning process.. Digital book can present books as learning tool in virtual form. Technology-assisted packaged book will be more attractive and follow the advance. (Warsita quoted by Anggraini, et.al, 2016).

The research conducted by Rusnilawati and Eva Gustiana (2017) stated that the teaching material was proper to be used as learning source. The developed teaching material was practical and effective at practicality score given by the students: 62.5 which means good and the one given by teacher: 25.5 which means excellent.

The research carried out by Maf'ula, et.al. (2017) on flipbook shows that the rate of materials feasibility given by validator I was 96.97% and by validator II was 100% which mean highly valid.

Referring to the background above, I restrict the problems into the development of interactive flipbook-formed teaching materials. The open question of this investigation in general is how the development, feasibility, and effectiveness of interactive flipbook-formed teaching materials impact on the grade IV students' Social Science learning outcomes particularly economic activities lesson in SDN Kandri 01. This investigation aims to develop, to test the properness and the effectiveness of interactive flipbook-formed teaching materials impact on the grade IV students' Social Science learning outcomes particularly economic activities lesson in SDN Kandri 01.

2. Research Methodology

This study used Research and Development (RnD). This study aims to solve the existing problem in education field. The development model used in this study was the one created by Borg and Gall adapted by Sugiyono (2015):
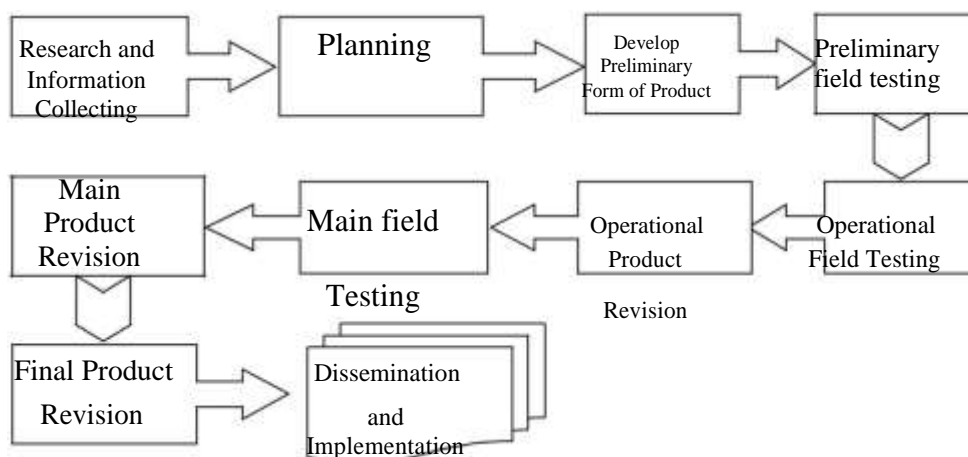
Picture 1. Development Steps by *Borg and Gall*

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This study used 8 steps, i.e. first, research and information collecting through pre-research activities. Second, I made plan based on the filled-in questionnaire on teacher's and students' needs. Third, I made the design or prototype of the teaching material design. Fourth, material, media, and linguistic assessors conducted validation. Fifth, I made design revision based on the assessors' advices. Sixth, I conducted small-scale product testing on 6 students as samples. Seventh, I made product revision after the testing. Eighth, I conducted the large-scale testing. The subjects of this research were 42 grade IV students in SDN Kandri 01. This study used the saturation sampling, i.e. involving all students in this study. The data were collected through testing, i.e. pretest and posttest and non-testing, i.e. interviews, small-scale survey, observation and documentation.

3. Results and Discussion

Research and development of interactive flipbook-formed teaching materials yielded the following things, i.e.: (1) development products of interactive flipbook-formed teaching materials; (2) feasibility test of interactive flipbook-formed teaching materials; (3) effectiveness test of interactive flipbook-formed teaching materials.

3.1 Development Product of Interactive flipbook-formed teaching materials

The followings are the development products of interactive flipbook-formed teaching materials

Picture 2. Front Cover

Picture 3. About the book and preface

Picture 4. User Guide and Table of Contents

Picture 6. BC, Indicators and Objectives

Picture 7. Map of Concepts

Picture 5. Core Competencies

Picture 8. Lesson Materials

Picture 9. Summary and Exercises

Picture 10. Glossary

Picture 11. Bibliography and Closing

3.2 Analysis on Properness of Interactive flipbook-formed teaching materials

Interactive flipbook-formed teaching materials took the feasibility test conducted by validator at likert scale. The properness of the interactive flipbook-formed teaching materials was tested using percentage descriptive test. The rate of the feasibility test was then described using grading by determining the ranges.

Table 1. Grading System Made by Validator for the Media Properness:

Percentage	Description
76% - 100%	Highly Proper
51% - 75%	Proper
26% - 50%	Fairly Proper
0% - 25%	Poorly Proper

From the contents feasibility test, the materials validator rated 87.5% which means "Highly Feasible". The presentation understandability test conducted by the tools validator scored 87.5% which means "Highly Understandable". Subsequently, the linguistic feasibility test conducted by language validator was rated 75.5% which meant "Feasible". Another prior study conducted by Mulyadi, et.al. (2016:296) shows that flipbook that was used when discussing visions and optical instruments was regarded as feasible and valid to be utilized based on the validation made by the three judges. Grade validation scored 4.1 which meant valid. The template aspect got the highest score.

3.3 Effectiveness Analysis of Interactive *Flipbook*-formed Teaching Material

The effectiveness of interactive flipbook-formed teaching materials for Social Science subject particularly economic activities was found from the cognitive learning outcomes through formative assessment, i.e. pretest and posttest prior to and after the utilization of the interactive flipbook-formed teaching materials. I conducted effectiveness test of interactive flipbook-formed teaching materials through large-scale tests. This test was taken by 42 grade IV students in SDN Kandri 01. The average pretest score was 66.8095 and the average posttest score was 78.4048. The pretest and posttest scores in this study subsequently counted using SPSS Version 16-assisted Shapiro Wilk test formula. Hypothesis comprises: Ho was accepted if sig value > 0.05 then data were stated as normally distributed. Ha was accepted if sig value < 0.05 then data were stated as not distributed normally.

Based on the calculation using SPSS Version 16 it was found out that significance value in the shapiro wilk column showed sig>0.05 both on pretest and posttest scores. The pretest score's sig value was 0.386 and posttest score's significance value was 0.117. Based on the data above, I can draw conclusion that the pretest and posttest scores are distributed normally. Thus the applied statistical instrument is parametric statistics.

I subsequently conducted hypothesis test using Paired Sample t-test. Hypothesis is acceptable if the significance value < α (α = 0.05). It means that 2-tailed significance value α (0.00 < 0.05). If t-value < t-table then H0 was accepted if t-value > t-table then H0

was rejected. Based on the calculation, it was found that t-value was 7.113 and t-table yielded from df calculation was then confirmed on the table containing the value of t-distribution, i.e. 2.021 at 2-tailed significance value 0.00. It was found, t-value > t-table, thus H0 was rejected.

Therefore I can draw a conclusion that of interactive flipbook-formed teaching materials for Social Science subject particularly economic activities was effective to utilize because there was mean interval pretest and posttest scores. This is in agreement with the prior study conducted by Anggraini and Walid (2016) which shows t-value calculation 4.48>1.860 thus Ha was accepted and H0 was rejected and they drew a conclusion that there was significant difference between pretest and posttest scores.

Next, I conducted average improvement test. The difference between pretest and posttest scores was counted using gain index analysis. What's meant by gain in this study was normalized gain (N-gain). N-Gain is normalization of gain found by comparing pretest and posttest scores using the scores disparity of Standard Best Score and pretest one in the lesson of acknowledging consensus after the utilization of the interactive flipbook-formed teaching materials. The following is the description of gain index interpretation stated by Lestari and Yudhanegara (2017: 235):

Table 2. *Gain* Index Interpretation

N-Gain Score	Description
N-gain ≥ 0.70	High
0.30 < N-gain< 0.70	Fair
N-gain ≤ 0.30	Low

The data shows that the learning outcomes improve in terms of pretest and posttest scores at interval mean 11.5953 and N-gain 0.349 described as fair. The average improvement shows that the interactive flipbook-formed teaching materials is very effective to be applied in Social Science learning particularly lesson of economic activities for grade IV students in SDN Kandri 01.

The prior confirming research was conducted by Rikawarastuti et.al, (2017) on the application of "KakAyu Dental Flipbook to enhance the primary school students' knowledge about oral health". The study shows that the average pretest score (80.85) bettered into 93.40 for the posttest. This shows the average improvement.

4. Conclusion

This study is Research and Development (R&D). The developed product in this study is the interactive flipbook-formed teaching materials for subject of Social Science particularly the lesson of economic activities. This study used research model developed by Borg & Gall adapted by Sugiyono which consists of 10 steps. I, however, took only 8 steps, i.e. research and information collecting, planning, and developing preliminary form of product, preliminary field testing, operational product revision, main field testing, main product revision, dissemination and implementation. Feasibility value of the interactive flipbook-formed teaching materials was found through assessment rate given by materials validator, i.e. 87.5% described as "highly feasible" and by linguistic validator, i.e. 75% described as "feasible". The average pretest score was 66.8095 and the average posttest score was 78.4048. Hypothesis test shows that the value of t sig (2-tailed) 0.000 < 0.05 and N-Gain was 0.349 descibed as fair. Based on the calculation above, I draw a conclusion that the interactive flipbook-formed teaching materials was effective to be utilized in Social Science learning, particularly economic activities for grade IV students.

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