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Development of Social Studies Textbooks Based on Environmental Education for JHS Grade VII

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Abstrak

Rencana Gerakan PBLHS yang telah disahkan sebagaimana maksud pada pasal 7 Peraturan Menteri Lingkungan Hidup dan Kehutanan Republik Indonesia Nomor 52 tahun 2019 pada ayat 2 menyatakan instruksi pengintegrasian gerakan PBLHS dalam Dokumen Satu KTSP. Diketahui buku ajar yang digunakan selama ini belum mampu mendukung program PBLHS, khususnya pada materi Kompetensi Dasar 3.3 sehingga pembelajaran yang terjadi dalam kelas tanpa melalui struktur dokumen yang tertulis. Kenyataan ini sekaligus menunjukkan bahwa pembelajaran IPS dengan jalannya Program PBLHS tidak terancang dengan baik. Penelitian ini bertujuan untuk menyusun buku ajar pembelajaran IPS terintegrasi program PBLHS dengan mengangkat tema 4 yaitu "Dinamika Interaksi Manusia dengan Lingkungan". Penelitian ini menggunakan desain penelitian research and development (R&D) menggunakan model pengembangan 4D models.

Kata Kunci: Buku ajar, ilmu pengetahuan sosial, pendidikan lingkungan hidup

Abstract

The PBLHS Movement Plan which was ratified as intended in article 7 of the Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number 52 of 2019 in paragraph 2 states the instructions for integrating the PBLHS movement in the One KTSP document. It is known that the textbooks used so far have not been able to support the PBLHS program, especially in Basic Competency 3.3 material so that learning occurs in class without going through a written document structure. This fact also shows that social studies learning through the PBLHS program is not well designed. This study aims to compile an Integrated Social Studies learning textbook PBLHS program with theme 4, namely "Dynamics of Human Interaction with the Environment". This study used a research and development (R&D) research design using a 4D models development model.

Keywords: textbooks, social studies, environmental education

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INTRODUCTION

Today's modern world is marked by two main concerns, namely the impact of globalization and concerns about environmental damage. The fact from the Stockholm conference early in 1972 produced a declaration that carried the theme of environmental sustainability at the global level, the declaration explained that humans will have a dependence on the environment around them (Beer et al., 2018). In this way, the increasing number of people in an area will be followed by an increase in demand for food, energy and housing needs where they will live. From this phenomenon, it can be illustrated which the higher the increase in food and energy needs, the impact on environmental damage will be if the population cannot manage the environment properly (Iswari & Utomo, 2017).

According to Setyanto (2018) education is proven to provide significant changes in influencing ecological conscious behavior. In addition, environmental education is a strategic step as an effort to respond to the response to global natural pressures (Balaguer & Cantavella, 2018). Therefore, in 2019 the government issued a policy through the PBLHS Movement (caring and culturing the environment in schools) as an effort to increase knowledge, skills, attitudes and actions that concern individuals or various parties with environmental issues for sustainable development for present and future generations. When education is able to equip individual knowledge from an early age it will provide opportunities for the formation of character caring for the environment (Rezkita & Wardani, 2018; Setyobudi & Marsudi, 2018).

Referring to the Minister of Environment and Forestry (2019), there are several components and standards that must be met in implementing the PBLHS Movement. First, identifying local or regional environmental potentials and problems by taking into account global environmental issues. Second, the PBLHS movement plan is a sheet containing school activity plans for the implementation of environmental implementation behavior (PRLH). Third, the Learning Implementation Plan, hereinafter abbreviated as RPP, is a face-to-face learning activity plan for 1 (one) meeting or more, which is developed from the syllabus to direct students' learning activities in an effort to achieve basic competencies.

Knowledge efforts to provide awareness of environmental preservation in the world of education are implemented through the integration of an environmental based operational curriculum. Environmental education in Indonesia gives schools the authority to plan the PBLHS movement through an operational curriculum that is developed and implemented by schools in developing environmental learning materials, namely by producing independent and integrated subjects with other subjects. So that Adiwiyata school seeks to link environmental education into the school curriculum in improving thinking skills, attitudes, and problem solving. Students are trained to care about the environment through real attitudes and actions. Instilling awareness and concern for the environment obtained from schools, educating basic humans in thinking and acting (Ma'nawiyah, 2019).

Researchers are interested in making observations at SMPN 2 Papar, because SMPN 2 Papar is one of the schools since 2015 that has attempted to develop and identify local and global environmental potential and problems in realizing the PBLHS movement. SMPN 2 Papar has also received the title of Adiwiyata school. The results of research observations show during the classroom learning, especially during the social studies learning. It shows that the learning given is still theoretical and less contextual in raising local issues, students also look less enthusiastic when the teacher explains about lessons related to environmental education. Another fact shows that there are still students who throw garbage in the drains in front of the class, the use of water is ineffective and the class conditions are not clean.

Based on this analysis, the researcher tries to solve the problem by conducting development research. Development is carried out by identifying the Basic Curriculum (KD) 3.3 on theme 4, namely the dynamics of human interaction with the environment. The choice of the theme took into account the relationship with the concept of environmental education which is the main aspect in supporting the PBLHS movement. The purpose of this research is to produce

instructional materials integrated with the Adiwiyata program which are of high quality and suitable for use by social studies teachers to improve children's thinking and skills at school.

METHODE

This study uses a product-oriented research and development (R&D) model. This research was conducted at the school of SMPN 2 Papar using the research subject class VII B as the control class and class VII C as the experimental class. This research is used to find new product designs and test their effectiveness. This research design uses 4-D models from Thiagarajan (1974) with the stages of define, desine, develop, and dessiminate. Teaching material research development procedures are as follows:

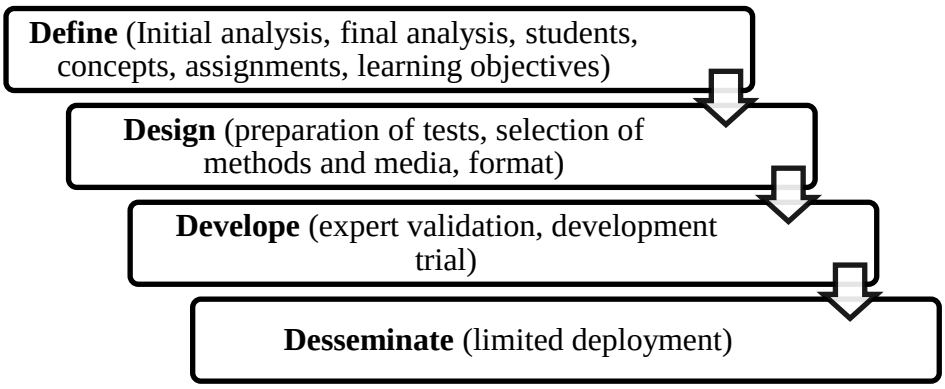

Figure 1 4-D models design flow

The define stage has the goal of determining the fundamental problems found in the research site. Early research shows that the value of social studies subjects integrated with environmental education materials is still low. It is known that the results of student learning have not been able to show the achievement of basic competencies which include knowledge, attitudes, and students' ability to solve problems. Furthermore, researchers conducted a concept analysis as an effort to identify the material needed by students. Then perform a task analysis to measure aspects of students' knowledge, attitudes, and problem solving skills.

The design stage includes the preparation of tests, selection of methods and media. The preparation of tests is designed to measure students 'learning objectives in achieving aspects of students' knowledge, attitudes, and problem solving skills. Then the media selection is based on the relevance of the current Covid-19 pandemic situation. By adjusting online learning, researchers make use of Google Clasroom and WhatsApp digital media to make them easily accessible in online learning.

The develop stage aims to produce a prototype of social studies teaching materials by raising environmental education material. So that before being used at the research site, it is necessary to validate by experts. The process of validating teaching materials is carried out by material experts, format experts, and practitioner experts. Material expert judgment includes aspects of content, language, and presentation. Format experts value the visual appearance and design aspects of learning. As well as expert practitioners provide value on aspects of the material, language, presentation, visual appearance and learning design.

Then to measure the effectiveness of the teaching materials that have been used by students. The test was carried out from the results of the comparative hypothesis of the experimental class and the control class using the Independent Sample T-test and interpretation using SPSS 21. Then using the basis of decision making (1) If the Sig. (2-tailed)> 0.05 then H0 is accepted and Ha is rejected, indicating that there is no difference in learning outcomes between the two groups of students, (2) If the Sig. (2-tailed) <0.05 then H0 is rejected and Ha is accepted, indicating that there are differences in learning outcomes between the two groups of students.

RESULT AND DISCUSSION

The research carried out is a type of research and development (R&D). The resulting product is in the form of IPS teaching materials integrated with environmental education. The results of the development can be used in schools by raising the PBLHS school movement. This research design uses 4-D models from Thiagarajan (1974) with the stages of define, desine, develop, and dessiminate.

Define Stage

The results of the observations showed that the trials in the class raised the material of integration of social studies learning with environmental education showed that the students' subject scores were still low. This reality is supported by not well-planned face-to-face learning activities through written documents. So that it causes dominant teachers to use teaching materials obtained from the government without properly integrating environmental education. The description above shows that there are gaps in the application of the environmental education curriculum in schools referring to ministerial regulation number 52 of 2019.

The picture above shows that there are problems that occur at school. Researchers try to provide solution steps in developing learning activities carried out in schools, further researchers conduct concept analysis as an effort to identify the material needed by students. These efforts are carried out in the hope that there will be an increase in social and environmental sensitivity and achieve aspects of knowledge, attitudes, and student problem solving skills. Thus, through the method above can solve the existing problem.

Design Stage

Researchers compile a reference test based on the specification of objectives and student analysis. On that basis, the researcher made 20 multiple choice questions to measure students' cognitive abilities and attitudes. Questions are made based on the dynamics of human interaction with the environment by integrating the concept of environmental education. In order to adjust learning during the Covid-19 pandemic, researchers used learning media teaching materials that were packaged in PDF. This step is considered effective on the grounds that it does not require difficult access when used online and can facilitate students' independent learning when studying at home.

Based on the results of the discussion with Ibu Juni Purwati who is none other than the homeroom teacher for classes 7B and 7C, researchers in conducting research at SMPN 2 Papar used the WhatsApp and Google form platforms. With the media selection agreement considered very effective and appropriate where WhatsApp can be used in class discussions, Google forms can be used to distribute and collect assignments.

Develop Stage

After the stage after the definition and design stage, the development stage is carried out. This stage requires a validity test conducted by material experts, format experts, and practitioner experts in order to determine the feasibility of the product. This effort is done by attaching the data questions from the researcher, to be filled in by the validator. After the assessment is carried out, it will display appropriate data or the teaching materials are not ready. With validity, a measure will be obtained that shows the levels of validity or validity of an instrument (Arikunto, 2009). The assessment results will be displayed in the following table:

Based on the evaluation of material experts, format experts, and practitioners, the mean score was 88.3% with the interpretation “no need for revision”. Therefore, the development of social studies teaching materials by raising environmental education materials is declared feasible to be tested in the field.

In order to obtain data on student learning outcomes. The researcher set up by dividing 2 class groups, namely the control class group from class VII B and the experimental class group from class VII C. In each class amounting to 32 students, it is known that in the experimental class

students who worked on the test results were 29 students and in the control class 25 students.

Table 1 Average Value of Expert Assessment

Validator	Aspek	Persentase	Interpretasi
V Material	Content	85 %	Valid
	Language	85.7 %	Valid
	Presentation	75 %	Rather Valid
V Format	Visual Appearance	90.7 %	Valid
	Learning Design	100 %	Valid
V Practitioners	Utilization	93.7 %	Very High Valid
	Total	**88.3 %**	**No need revision**

Annotation:
V = Validator

The experimental class will be given treatment using teaching materials developed by researchers, while in the control class using teaching materials developed by the class teacher. Researchers use the help of Google Form questionnaires to collect student responses. The test was carried out from the results of the comparative hypothesis of the experimental class and control class using the Independent Sample T-test and interpretation using SPSS 21. With the following results.

Table 2 Group Statistics Test independent sample T-test

Group Statistics

	Kelas	N	Mean	Std. Deviation	Std. Error Mean
Nilai	Kelas VII C	29	67.5862	11.99856	2.22808
	Kelas VII B	25	51.4000	15.51344	3.10269

Based on table 3 "Group Statistics" it is known that in class VII C there were 29 students, while in class VII B there were 25 students. Class VII C has an average value of learning outcomes of 67.5862, while class VII B has a value of 51.4000. Thus, if it is described it can be concluded that there is a difference in the average learning outcomes between class VII C and VII B students. The next step is to provide evidence whether the data displayed has a significant difference or not, will be displayed in the output of the "Independent Samples test" through the table below.

Table 3 Group Statistics Test independent sample T-test

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Nilai	Equal variances assumed	2.701	.106	4.319	52	.000	16.18621	3.74796	8.66537	23.70704
	Equal variances not assumed			4.237	44.901	.000	16.18621	3.81982	8.49223	23.88018

Based on the results of data processing that has been done, it is known that Sig. Lavene 'Test for Equality of variences has a value of 0.66> 0.05, it means that the data from the two groups class

VII B and VII C are homogeneous or the same. The results of the "Independent Samples Test" output table for the "Equal variances assumed" section are known to have a Sig value. (2-tailed) of 0.000 <0.05. As the basis for decision making in the Independent Sample T Test which states, if the Sig. (2-tailed) <0.05 then H0 is rejected and Ha is accepted. So it can be concluded that there is a significant difference between the learning outcomes of class VII B and class VII C students of SMPN 2 Papar.

The development of textbooks was prepared to solve the gap in the application of the environmental education curriculum in schools related to ministerial regulation number 52 of 2019. The results of the interview stated that the integration of social studies learning with environmental education was not perfect, so that the learning provided was still theoretical and less contextual in raising local issues. Students also look less enthusiastic when the teacher explains lessons related to environmental education. The presence of teaching materials is considered capable of providing innovation in integrated social studies learning in environmental education.

Linking local and global issues around the student environment will provide breadth and depth of curriculum implementation (Prayogi, Utaya, & Sumarmi, 2019). This effort also offers students the opportunity to bring up dynamics in education (Rachmawati, 2013). The effectiveness of social studies teaching materials integrated with environmental education will produce evidence of student learning outcomes. In the learning outcomes, it is known that there are psychological activities in the form of thinking activities, expressing opinions, making conclusions, and social activities in the form of cooperation between students in groups that help each other. The emergence of various student activities in learning because the social studies learning situation is integrated with environmental education providing students to carry out various activities. With high activity, it shows students are enthusiastic about learning.

Integrated social studies can also increase student activities for more exploration in learning activities. As stated by Nugroho (2017) that curriculum integration as a design stimulates students and teachers to explore, collect, process, improve, and present information on topics they need to investigate and are not limited by one subject.

Based on the results of the learning outcomes test, namely the test of differences in social studies learning outcomes integrated environmental education provides effective results. The learning outcomes show completeness both classically and individually, indicated by learning outcomes that are significant and significantly better than the control class. The practicality of developing teaching materials can be seen from the positive response of students to the social studies learning process. Field trials show that most students consider the presence of teaching materials to make learning fun and generate curiosity about environmental education more broadly. According to students, learning developed is easy to understand and not boring. Learning makes students aware of the potential and problems that exist in their environment. A positive response was also received by the teacher because the results of the development of social studies teaching materials integrated with environmental education succeeded in linking the PBLHS movement curriculum which previously did not work perfectly The development of material on the dynamics of human interaction with the environment has provided a concrete picture of thematic learning according to the characteristics and needs of students. As a support for the success of learning, it should be creative in integrating contextual themes that are close to the student environment. As stated (Sulistyosari, 2018) that teachers are an important factor in realizing the quality of learning, so they must be creative in integrating learning.

CONCLUSIONS

Based on the process that has been carried out, the researcher succeeded in presenting the development of social studies teaching materials integrated with the PBLHS movement. The results of the analysis using the "Independent Samples Test" show that the Sig. (2-tailed) of 0.000 <0.05, which means that there is a significant difference between the learning outcomes of class

VII B and VII C students of SMPN 2 Papar. The researcher succeeded in presenting a form of adjustment to the environmental curriculum in developing local issues as an environmental learning material.

Based on the research that has been carried out, suggestions that can be given based on the conclusions of the results of this study are 1) Social studies majors should be able to develop IPS teaching materials that are integrated with the Adiwiyata program as well as in the continued development of students' skills in the abstract and concrete domains. Then talking about the expansion implementation should be able to take another topic. 2) For SMPN 2 Papar subject teachers, they should be able to use the module as a reference for environmental learning innovation and can work together in developing subject matter by raising environmental-based issues along with the Adiwiyata program. Teachers can also develop skills for students, especially on the topic of sustainable development. 3) For further researchers, they should be able to respond to increasingly complex environmental problems, it is necessary to carry out further research in the realm of basic education. With a lot of human resources, efforts to develop the potential are needed to have benefits and potential. In the aspect of formal or non-formal school education there are many more skills development efforts in the aspects of content, strategies, methods, models, evaluation, etc.

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