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## INTEGRATION OF ENVIRONMENTAL VALUES INTO TEACHING MATERIAL

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### Abstract

This research was conducted to develop teaching materials such as books by integrating environmental values. This type of research is descriptive research. There are 10 steps used to develop the book, namely: Potential and problems, data collection, product design, design validation, design revisions, test products, product revision, user testing, product revision, mass production (Sugiyono, 2009). This study aims to determine how important this book teaching materials to be developed. This study was conducted on two schools are located in the county Adiwiyata Boyolali, Central Java. The results showed that the values of the environment is theoretically controlled by the students but by the actions of students have yet to implement those values. Of the two theoretically Adiwiyata school students know the values of the environment. However, most students have not been able to apply the values of the environment properly. This is because each student's learning style is different, there is enough to read, there is nothing to see, nothing to be seen and touched, and so forth. From these results it can be concluded that the teaching material books that meet the needs of students by integrating environmental values is important and needs to be implemented.

**Keywords:** Development, Teaching Materials, Books, Environmental Values

### INTRODUCTION

Humans are powerless is the man who can think of active, independent, and that can establish itself and society. To become a powerless man who certainly needed a powerful education anyway. So what you think, do, and have generated benefits. Hamalik (2010) states that education is a process in order to persuade young people to be able to adapt as best as possible to the environment and thus will lead to a change in him that allowed it to function optimally in society. From these opinions can be said education should achieve three domains, namely affective, cognitive and psychomotor. These three domains are used as basis helpless human form.

In forming the student to become an empowered human being, borne by the education provider that educational institutions. In the process of the formation of these students have to go through a process called learning. Susanto (2013) explains that learning is programmed activities of teachers in instructional design, to make students active learning, which emphasizes the provision of learning resources. It can be said of the opinion that learning is used to form the students become empowered humans depends on the learning resources used during the learning process.

Learning resources can be obtained from a variety of things, but in the implementation of the present study in Indonesia which is still in the

process of switching the curriculum, learning resources focused on learning books provided by the government. By relying on a given book, the problems arising in the field. This was confirmed from the results of observations show that the textbook is used for this has not been in line with expectations of teachers because less profound learning materials, as well as existing textbooks do not meet the needs of students who have the ability to absorb the diversity of information given in the study.

Students have different characteristics such as cognitive ability, readiness to learn, level of motivation, and learning styles (Demir, Kilinc, and Dogan, 2012). No exact same individuals with each other, learning styles store and manage information also vary (Dasdemir, 2016). Some students can easily remember information just by reading once, but there are a few other students who need to read several times. There are also some students who are capable of storing information in their brains just by looking at the objects, but some others need to touch, practice, and perform more in-depth study of a particular object. Thus, each student has a unique style of teaching materials processing (Marleny, Aloysius, Ibrahim, and Hadi, 2017).

Textbooks are still not as expected teachers and students certainly affect all sorts of things, not least the formation of students to become empowered humans will also be less appropriate.

As well as education to care for the environment will be noticeably less than the maximum. From the observation of many students who still have not been able to implement what has been learned. As in the case of taking out the trash, taking care of plants, and cleanliness. Students with previously acquired learning about caring for the environment, but at the time of the break still littering, broken play that led to the park, and not conducting environmental hygiene. Basically, their school is a school Adiwiyata upholding a sense of concern for the environment.

Based on the description above, in order to develop students' ability to absorb information and be able to apply the values of the environment, required textbooks in accordance with the needs of students. In addition to considering the needs of students, textbooks are developed also integrate the application of environmental values in every activity. With the hope that students used to perform a variety of actions that reflect concern for the environment.

The purpose of this study to describe the state of the textbook used in the learning activities and analyze the need for textbooks Adiwiyata environmental themes based on aspects of learning conditions, availability of textbooks, and textbooks interest in environmental themes based Adiwiyata.

**RESEARCH METHOD**

This type of research is descriptive research that is used to describe the state of the textbook and analyze the necessity of textbook-based environmental themes Adiwiyata for Elementary School fifth grade. Sukardi argued descriptive study aims to systematically describe the facts and characteristics of the object under study as appropriate.

For the development of textbooks will be done through the 10 steps, namely: Potential and problems, data collection, product design, design validation, design revisions, test products, product revision, user testing, product revision, mass production (Sugiyono, 2009). This makes this research is the first and second stages in the development process of the book.

Implementation of the field study, the sample used purposive sampling. Subjects of the study are students and fifth grade elementary school teacher in the District Ampel, Boyolali applying Adiwiyata, which amounts to 2 schools, 2 teachers and 60 students.

Sources of data in this study were teachers and students, events, and documents. Data were collected through interviews, observation and document analysis. Measurement data on the validity of this research is done through triangulation, and inspection

peers through discussion. Furthermore, the data were analyzed using interactive analysis techniques disclosed by Miles and Huberman namely: the data collection, the data condensation, a data display, and conclusion.

**RESULT AND DISCUSSION**

In this section, will put forward a description and analysis of data on textbook needs based Adiwiyata environmental themes for the fifth grade elementary school. The results of this study, can generally be described as follows: (1) there are limitations in the textbook used; (2) the application of environmental values is not maximized; (3) teachers and students need textbooks that foster a sense of concern for the environment and in accordance with the student's learning style. Data collection techniques in this study with interviews, observation and document analysis.

Interviews were conducted to two fifth grade elementary school teacher in District Ampel, Boyolali. Based on the results of these interviews obtained information that in general teachers are not satisfied with the textbook provided by the government, because the material is no less profound deliberations. With less inside the material, the use of the textbook only as a guide to find the source and other references with more in-depth discussion. In addition, teachers also revealed that find it difficult to use textbooks provided by the government, because according to teacher learning material does not sort or lope so planting concept to students is quite difficult.

Based on interviews with teachers fifth grade elementary school in District Ampel, Boyolali district can be known that the needs of textbooks as expected of teachers have not met properly. For planting environmental values based on observations and interviews to the students show that awareness of environmental values embedded only in the mind, while the action is not maximized. It can be seen in Table 1.

Table 1. Results of Student Interview

Core Values Environment	School	School
	Adiwiyata 1	Adiwiyata 2
Throw garbage in its place	30	30
Picking up trash scattered	28	29
Sorting of waste according to its type	20	21

From the table above it can be seen that out of 30 fifth grade students in the school Adiwiyata 1 theoretically aware of the importance of disposing of

waste in place. But in terms of picking up trash that littered decreased with only 28 students who know why you should do this. The number of students who know the basic values of the environment in terms of waste sorting according to its kind also decreased significantly, with only 20 students who know the type of waste according to its kind.

Similarly, the second Adiwiyata school where 30 students of class V in theory know the importance of disposing of waste in place. In terms of picking up rubbish strewn also with schools Adiwiyata 1 which decreased, but at school Adiwiyata 2 is not so much a decline where there are 29 students who know why you should pick up the garbage scattered about. However, significant declines occurred in the basic values sorting the waste according to its kind that only 21 students who know the kind of garbage.

The results of these interviews can describe how students perform everyday school environment. In theory, both schools have been said most of the students understand the basic values of the environment as a form of protecting the environment. Based on observations, in practice, students are still not able to implement what they already know and consequently also they already know. Just as there are still many students who litter, let the rubbish strewn, trash regardless of its kind. It can be seen in Table 2 below:

Table 2. Observations Implementation of Environmental Values

Core Values Environment	School	School
	Adiwiyata 1	Adiwiyata 2
Throw garbage in its place	12	10
Picking up trash scattered	7	5
Sorting of waste according to its type	4	2

The observation of the application of environmental values in Table 2 can be seen that both Adiwiyata School fifth grade students are still not able to apply the theory she already knew about the basic values of the environment. In the case of applying dispose of waste in place Adiwiyata School 1 of 30 fifth grade students only 12 students do while in school Adiwiyata 2 only 10 students. When compared to the results of interviews of students in table 1. The previous, students' awareness is still far from the expected. Similarly, picking up trash that littered the awareness of students in the school to do so in Adiwiyata 1 only 7 students and school Adiwiyata 2 is only 5 students. Sorting waste according to its type also there are only four students

in the school awiwiyata 1 while in school Adiwiyata 2 only 2 students who do.

Interviews and observations can be seen clearly that the students theoretically know the values of the environment is able to master well, but in reality the field is based on the observation of many students who still have not been able to apply theories already mastered into everyday activities. As well as the research that has been done by Dona Asteria and Heru Heruman (2016) which established the Waste Bank Shoots Rehearsal, where the concept of this garbage banks are dried and sorted waste collection as well as the appropriate management of banking but not the money saved but trash. In order to realize a clean living environment from waste through recycling in line with research conducted by Laurie James (2016) to determine how to minimize waste in the school environment by reducing, reusing, product recycling, and composting. By conducting green schools and concepts mature implementation, 93% of the waste in the school can be resolved.

From these studies the application of the values of the environment can be implemented. Besides workable environmental values are also expected of students are used to doing all kinds of things that reflect concern for the environment. With the complete textbook contents, then each student has individual learning styles can easily understand a learning material. For students with learning style should taste, touch, and see firsthand, it would require a book, incorporating an information and practical activities.

This is reinforced by research conducted by Marleny, Aloysius, Ibrahim, and Hadi (2017) kinesthetic learning style has a significant effect on emotional intelligence compared to hearing and reading. Students with kinesthetic learning style are more likely to learn from the experience gained when they perform certain activities. Kinesthetic learning is the kind of style that is easy to receive and process information through a series of activities to move some or all parts of the body do things that are learned. Body and hand movements correctly and on time is another way that can be used to develop emotional intelligence.

Student's learning style is influenced by several factors. These factors include physical, emotional, sociological, and environmental (Sigh, 2014). To determine the success of a study of the need for an evaluation or test. Learning outcomes as measured by the test essay and multiple-choice test, the result will be different. Essay test was scored less, after a multiple-choice test results are satisfactory, and vice versa (Sumantri & Retni, 2016). With the existence of three types of tests are expected by the diversity

of learning styles and style of student understanding can be met in one book learning. With the book according to the needs of teachers and students is certainly a learning will be in line with expectations and gain maximum results.

## CONCLUSION AND SUGGESTION

Based on research data analysis and discussion can be concluded that the textbook in class V Elementary School has not been in accordance with the needs of teachers and students. Awareness of the environment is still low and the values of the environment can not be embedded in students. The results of the needs analysis showed that (1) there are limitations in the textbook used; (2) the application of the environmental values of the maximum forgetting; (3) teachers and students need textbooks that foster a sense of concern for the environment and in accordance with the student's learning style. Based on the above results, there are some suggestions that can convey the researchers need to develop textbooks based Adiwiyata environmental themes. The development is expected to help teachers and students in the learning process.

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