

DEVELOPMENT OF SOCIAL STUDIES TEACHING MATERIALS BASED ON ECOLOGICAL LITERACY IN 5TH GRADE SD NEGERI 1 CINIRU, KUNINGAN, WEST JAVA

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Abstract: Social skills are needed by Indonesian people to lives in the 21st century. The problem of the lack of social skills that Indonesian citizens need to have, especially elementary school children who are considered to be the next generation to built a superior nation, is very clamorous. Therefore, research on the development of social studies's teaching materials in elementary school education needs to be held. The type of research is Research and Development (R&D). This research aims to: 1) develop social studies's teaching materials based on appropriate ecological literacy, and 2) find out the effectiveness of social studies teaching materials based on ecological literacy. The results of the limited test are products of teaching materials and lesson plan according to expert validators is feasible to use. Test the effectiveness of learning outcomes shows a significant difference. There are significant differences in student learning outcomes both in terms of knowledge, awareness and application in its ecological literacy platforms.

Keywords: teaching materials, social studies, ecological literacy

1. Introduction

Condition of world population growth 21st century of the earth's natural productivity capacity. A large population to advance the country, if it is not balanced with a sufficient level of understanding about ecology, that means disaster. This is a real fact for human life and nature. Consequences that appear, as follows. First, the two so-called results in energy use and arbitrarily lead to ecological crises (Gilbert, 1996, p. 74; and Sumaatmadja, 1996, p. 9). Second, modern view becomes object and society as a machine. Society is not humane (Sumaatmadja, 2002, p. 47). Third, in the view of modernism if there is no longer in religion called the basis, namely human desires that are material are endless. Poison, moral and religious values are lost in authority.

Education is a very important sector in the development of human resources to continue to develop in various aspects of the environment. The importance of education in elementary schools, especially social studies education. The mindset that raises the idea that elementary students as an initial milestone in laying the foundation of the body needs to be fostered and given direction regarding the procedures for managing the environment. In this case the growth of ecological intelligence that is able to produce a strong impression on environmental survival. The process of growing the things needed from the process needed to preserve the living environment with the indications in the environment. This process is called empathy. There is empathy for individuals to know others, predict their behavior and think about them (Baron-Cohen & Wheelwright, 2004).

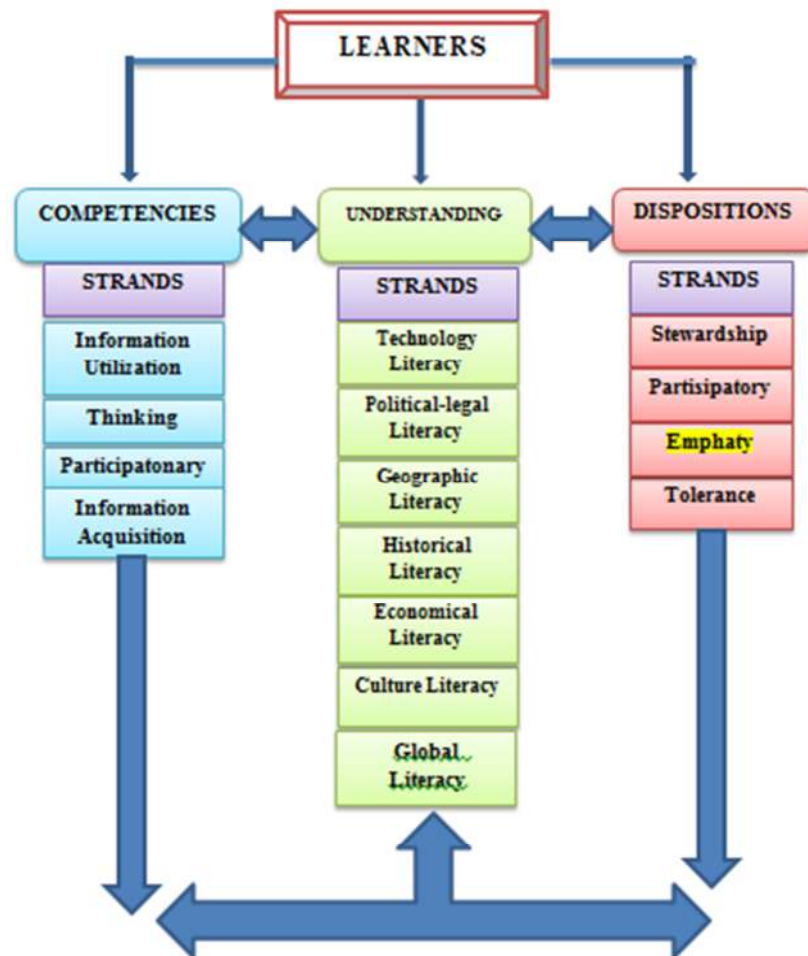
2. Related Works/Literature Review

A broad understanding of social studies is formulated by NCSS (1993) in Sapriya (2009, p. 10) as follows.

Social studies is the integrated study of the social sciences and humanities to promote civic competence. Within the school program, social studies provides coordinated, systematic study drawing upon such disciplines as anthropology, archaeology, economics, geography, history, law, philosophy, political science, psychology, religion, and sociology, as well as appropriate content from the humanities, mathematics, and natural sciences. The primary purpose of social studies is to help young people develop the ability to make informed and reasoned decisions for the public good as citizens of a culturally diverse, democratic society in an interdependent world.

The concept of understanding from NCSS states that social studies is integrated and interdisciplinary from the social sciences, aims to analyze (make decisions) critically from any facts, events, past or present events in order to anticipate life in the future. In addition, students are expected to be able to behave and act in accordance with the norms and ethics that exist in society so that they can adapt, participate in social life, and can contribute positively to the progress of society and the State and a world that is interdependent. Meanwhile, the social studies concept is referred to as part of the elementary school curriculum which contains subjects of various social science disciplines that are applied to education. Along with changes and community dynamics, social studies are moving towards the transmission of values that shape citizens who actively participate in the community.

For Wright (1996, p. 17) the purpose of social studies education is more seen as an effort to encourage students to develop personal qualities through the process of knowing, exploring, reflecting, and assessing. In detail the objectives are described in three strands that are inseparable, mutually supportive, and in a balanced position. All three are understanding, which includes historical, geographic, economic, cultural, political-legal understanding, global understanding and technology. The next description is competencies, which includes the ability to think, participate as citizens, absorption of information, and use of information. The third Strand, is disposition, which includes tolerance, empathy, participation as citizens, and an attitude of wanting to serve. The three strands are described in the following chart:



Picture. Scope of Social Studies Education Objectives (Wright, 1996, p. 17)

Empathy as the disposition strands described above are students' attitudes toward objects, especially social and psychological objects in the surrounding environment consistently by involving knowledge, competence, and understanding in a broad sense, which provides a place of feeling or affective aspects in the process (Wiyanarti, 2011, p. 38). This is the same as the thought of Lapp, 1985, p. 32; Mueller, 1986, pp. 43-44; and Feldman, 1989, p. 76, that empathy can be interpreted as an attitude or a mental readiness or a controlled body organ emotionally to be creative in a consistent manner, inclined to their beliefs and feelings towards likes or dislikes, pros or cons, positive or negative against a psychological object or situation related to the object.

Based on the explanation above, it can be concluded that the concept of empathy is defined as (1) the tendency to think, perceive, feel, and act in the face of objects (in the form of situations, ideas and values); (2) empathy is motivating; (3) empathy awareness arises from experience, is not brought from birth but is the result of learning. Although empathy cannot be observed directly, it must be interpreted in advance of individual behavior that appears both verbally and non-verbally, empathy remains important to be an IPS learning goal. Primary school students' empathy as an integral character in the objectives of social studies education, in addition to tolerance, participatory, and caring and serving as citizens, must be developed in the right learning step with the aim of directing and guiding students to have environmental awareness to form ecological literacy.

Ecological literacy (Goleman, 2010, p. 37) emphasizes the ability of humans to adapt to the ecological form in which humans are located. Ecological means understanding the organism and its ecosystem, while intelligence is the capacity to learn from experience and effectively deal with the environment. Ecological literacy is an understanding of the hidden ecological impacts and solutions to improve it.

Goleman (2010, p. 39) reveals that ecological literacy combines cognitive with empathy for all forms of life. Social and emotional intelligence builds on the ability to see other people's perspectives, feel everything that others feel, and show our care. The existence of ecological literacy extends this capacity to all natural systems. Ecological values developed in education are summarized into ecological literacy for students so that they are able to view the environment as something that needs to be maintained and preserved. Increasing ecological literacy in schools is the right and important pathway as a way to maintain and preserve the environment around students. The steps that need to be taken to realize ecological literacy into character in each student can be done through character education. Character education according to Lickona (2013, p.23) is education to shape one's personality through character education which results are seen in a person's real actions, such as good behavior, honesty, responsibility, respect for the rights of others, and hard work.

Value awareness is the basis of a person's actions that require a process not only to know, but through a coaching process that ultimately forms skills or life skills. In other words, efforts to improve value awareness gradually become an attitude that can be internalized by students through social studies learning with character. The form of empathy that is a measure is the empathy of students towards living things, namely (1). fellow human beings; (2). animal; (3). plant. Social studies learning that enhances and develops good character in elementary school students can be reflected in the knowledge, awareness and application of students when the learning process takes place.

Understanding further from empathy theory within the scope of this research, is inseparable from the explanations of various approaches. Among them is the approach used to understand empathy theory, namely the theory of Baron-Cohen & Wheelwright (2004), which divides empathy into two approaches, namely: (a) Affective approach. The affective approach defines empathy as an emotional observation that responds to other affective. In the view of affective, the difference in the definition of empathy is seen from how big and small the observer's emotional response to emotions occurs in others. There are four types of affective empathy, namely: 1) the feeling of the observer must be in accordance with the person being observed; 2) feelings for observers according to the emotional condition of others but in other ways; 3) inhibitors feel emotions that are different from the emotions they see, also called contrast empathy (Stotland, Sherman & Shaver, in Baron-Cohen & Wheelwright, 2004, p. 4). In addition, feelings for the observer must be one for attention or affection for the suffering of others (Batson in Baron-Cohen & Wheelwright (2004). (b) cognitive approach. The cognitive approach is an aspect that gives rise to an understanding of the feelings of others. Eisenberg & Strayer (in Baron-Cohen & Wheelwright, 2004) states that one of the most fundamental processes of empathy is the understanding of differences between individuals (perceiver) and others. In other words, the separation between one's own perspective, connecting the mental state of others (Leslie in Baron-Cohen & Wheelwright (2004)), and concluding the possibility of the contents of their mental condition, and recalling when the same thing happened. It is increasingly clear that empathy is formed in terms of affective and cognitive, and forms or results of knowledge and attitudes are contained in the application or action. The two things are mutually related and related to one another, something that is a link in the formation of empathy which is an indicator of research on ecological literacy.

Teaching materials / learning materials are the most important things in the book that students use in the learning process in accordance with the current curriculum, where teaching materials / learning materials are in accordance with the Competency Standards (SK), Basic Competencies (KD) and Learning Indicators. So it is expected that the presentation of the learning material in it must be in-depth and the expansion of the material carried out relevant to the development and needs of students. Described by Devi, Sofiraeni, and Khairudin (2009, p. 13), that teaching materials need to be developed by teachers to support the achievement of students' competencies. The selection of effective teaching materials must be in accordance with the demands of the indicator so that it can increase the achievement of competence to the fullest. Thiagarajan (1974, p. 5) stated that teaching materials are:

A number of model for instructional development have employed the common step of analysis, desain, and evaluation. The system-approach model around which this sourcebook is organized is based upon these earlier models and upon actual field

experince in designing, developing, evaluating and disseminating teacher- training materials in special education.

It was explained that a number of instructional development models in general usually use analysis, design, and evaluation. With book sources prepared based on previous models and actual factual field experiences in designing, developing, evaluating and disseminating teacher training materials in special education.

Based on various theories, the above description can be concluded that teaching material is all material material or learning content that must be mastered by students to support the achievement of students' competencies in order to assist teachers in carrying out the learning process activities, which contain learning material that students must learn to guide the progress of students through instruction in order to achieve the progress of competency standards or sub-competencies that are expected to suit the needs of students.

Tomlinson (1998, p. 98) in the development of teaching materials can be done by following six stages, namely. *Identification of need for material*, 2) *exploration of need*, 3) *contextual realisation of material*, 4) *pedagogical realisation of materials*, 5) *production of material and student use of materials* and 6) *evaluation of material against agrees objective*. The six stages described interrelated with one another appear in the following chart.

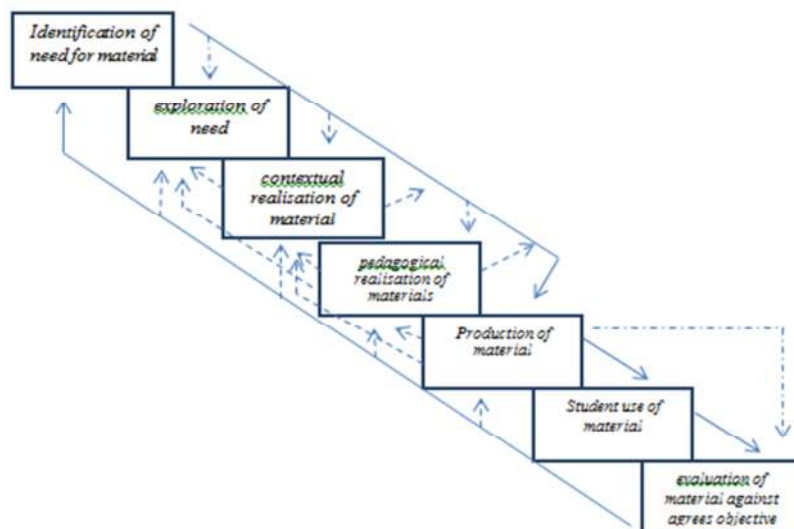


Figure.1. The stages of developing teaching materials

The following is an explanation of the stages of developing social studies teaching materials: (1) Identification, at this stage based on the results of observations and interviews with fifth grade teachers at SDN 1 Ciniru, it is known that social studies teaching materials are needed based on ecological literacy in order to facilitate the inculcation of aspects of empathy; (2) Exploration, at this stage the teaching materials are made in such a way based on ecological literacy in the development of materials to facilitate integrating empathy in addressing problems; (3) Contextual realization contains proposals for new subject matter that will be created because of the discovery of ideas that are more suitable, more contextual. Social studies material used in teaching materials is material for semester 1 of fifth grade by integrating empathy in addressing the problems that arise from each discussion; (4) Pedagogical realization involves discussing the exercises of the subject matter and its learning activities appropriately and the writing of the activity instructions is easily understood; (5) Production in producing subject matter needs to consider layout, paper size, visuals and so on; (6) Use of material (trial). The lesson material that has been printed is tested on students; (7) Evaluation. From the process of material testing, evaluation was done to improve. Analysis of the problem leads to the previous stages according to the type of problem; (8) The development of teaching materials must be principled on the existence of achievement, can help students feel easier in understanding, develop

students' self-confidence, relevant to those experienced by students and useful, facilities needs can be fulfilled by students themselves, utilizing a number of learning styles, able to maximize the potential of learners both intellectually, emotionally and socially so that they can open up opportunities to receive feedback (Tomlinson, 1998, p. 102).

3. Material & Methodology

a. Data

1) Research subject

The subjects of the trials in this research and development are as follows: (1) limited test: two expert validators who are competent in social studies learning based on ecological literacy, empathy aspects, (2) main test and effectiveness test: fifth grade SD N 1 Ciniru, Jalaksana, Kuningan, West Java with 20 students.

2) Data Collection Instrument

The instruments used in this research and development are interview guidelines, lesson plan feasibility assessment sheets, observation sheets of empathy aspects of ecological literacy and teacher response questionnaire sheets. The lesson plan validation involves two expert validators. The validation sheet used is an assessment sheet of the lesson plan and a feasibility assessment sheet for teaching materials.

3) Data analysis technique

Qualitative data in this research and development is obtained from: (1) the results of interviews at the exploration stage; (2) observation results. The data obtained were analyzed using interactive analysis techniques to revise and improve the products developed. Quantitative data in the form of scores of expert validator assessments, results of questionnaire responses of teachers to products, instrument test questions and observations of ecological literacy aspects of empathy. Data analysis techniques for the feasibility of learning devices were carried out by the following steps: (1) tabulation of all data obtained from the validator for each component and assessment items available in the assessment instrument, (2) calculating content validity coefficient using the Aiken's V formula based on the results of the assessment of expert validators as many as people against an item. Assessment is done by giving a number between 1 (ie very irrelevant) to 5 (ie very relevant) (Azwar, 2013, p. 113).

4) Trial Design

The trial was carried out aimed at perfecting the teaching materials developed by practicing them directly in the field and knowing the effectiveness of the products. The trials carried out included three stages, namely limited testing, main test and testing and implementation. Limited testing is carried out by experts (expert judgment). The main test was conducted in 5th grade SDN 1 Ciniru, Kuningan, West Java.

b. Method

This research was designed in the form of development research (Research and Development or R & D). Borg & Gall (1983, p. 772) revealed that there are ten steps in carrying out research and development. The steps are as follows: (1) collecting information and conducting initial research (research and information collecting); (2) planning; (3) developing a preliminary form of product; (4) initial trial (preliminary field testing); (5) revise the test based on the results of the initial trial (main product revision); (6) carry out the main field test (main field testing); (7) revise after getting input from the main field test (operational product revision); (8) conducting field operational tests (operational field testing); (9) conducting the final product revision (final product revision); and (10) disseminating and implementing the product (desimination and implementation). This research was only carried out from step one to step nine because of limited funds and time.

4. Results and Discussion

a. Result

Based on the stages of needs assessment, the researchers designed teaching material products based on ecological literacy on empathy aspects. The resulting product is in the form of a lesson plan that will later be validated by the media expert validator and material expert validator. Product expert

validators and lesson plan are Isnaini Wulandari, M. Pd and Yogi Kuncoro Adi, M. Pd. These validators provide input and assess lesson plan and teaching material products based on ecological literacy on aspects of empathy developed by researchers. Validation results show that teaching materials that have been prepared are suitable for use. This can be seen from the results of data analysis on the validation material for teaching materials conducted by two validators.

In addition, as a companion and reinforcement of the development of instructional materials that have been compiled, researcher also validate lesson plan to experts or validators. Lesson plan was developed by containing identity, competency standards, basic competencies, indicators, learning materials, approaches and methods, learning activities, sources, media, and scoring assessments. The draft of lesson plan is four to four times learning or meeting activities. The learning steps in the lesson plan are designed with student-centered learning steps based on ecological literacy that have been adapted to the 2006 KTSP curriculum.

Product trials were carried out in two stages: limited trials, and the main trial. The limited trial aims to test the feasibility of the product. Product feasibility testing is carried out by the validator of media experts and validators of material experts using a product assessment questionnaire. The results of the evaluation of the validator are then assessed the level of relevance between validators using Aiken's V. statistics.

The following are five validated teaching material indicators: a. Identity of teaching materials; b. Material feasibility; c. Linguistic; d. Serving; and e. Integrity. The results of the lesson plan feasibility test assessed by the validator are presented in the appendix. The results of the validator's assessment are then assessed the level of relevance between validators using Aiken's V statistics. The range between the V numbers obtained above is between 0 to 1.00, then the number 0.909 mean Aiken's V score in the validator table can be interpreted as a high enough coefficient for each the indicator. This means that every indicator contained in the lesson plan has good content validity.

The main trial was conducted to determine the effectiveness of the product being developed. To test the effectiveness of the product, the research was conducted for 1 week by pretesting and posttesting the students as well as the teacher's response questionnaire to see the extent of the effect of the product on the impact. The aspects seen in the pretest and posttest are the knowledge, attitudes, and skills presented as follows. (1) Knowledge Aspect. Knowledge aspects are aspects that are assessed by students' cognitive. The results of pretest and posttest showed that as many as 19 students who experienced an increase in learning outcomes, or if calculated in the form of a percentage of 95% of students experienced an increase. As many as 5% of students who did not experience changes were students with the following details, 1 student who got 80 grades both in the pretest and posttest. (2) Aspects of Empathy Attitude. The aspect of empathy attitude is an aspect that is assessed from the attitude of students during learning. Assessment of this aspect of empathy is carried out by pretesting and posttesting students during their learning. There are changes in aspects of empathy for students that can be seen from the results of the pretest and post-test. The results of pretest and posttest showed that as many as 20 students who experienced an increase in learning outcomes or can be found in percentage obtained 100% of students experienced an increase. A percentage of 100% when interpreted qualitatively is categorized as effective because it is in the range of 81% -100%. (3) Skills Aspect. The skill aspect is an aspect that is assessed from the students' skill abilities. Assessment of aspects of this skill is done by looking at products or performance results for students. The following are the results of the pre-test and post-test on aspects of grade V skills at SD N Ciniru, Kuningan, West Java. (4) Teacher's Response to Products. In addition to seeing the effectiveness of the students' pre-test and post-test results, the effectiveness of the product was also supported by questionnaire opinions / responses of grade V teachers in SD N Ciniru, Kuningan, West Java on products. The average percentage of each indicator in the questionnaire above is 94.5%. This figure can be interpreted that IPS teaching material products that have been made are very effective because they are in the range of 81% -100%.

b. Discussion

The final product of social studies teaching materials based on ecological literacy, empathy and lesson plan aspects is a product of improvements from the initial draft, limited test product revisions,

and revision of the main test products. Based on the results of the lesson plan validation that was developed and the main test showed that there was an increase in the assessment of the products of social studies teaching materials and the lesson plan developed. This shows that the revisions made to the product have positive results.

Teaching materials / learning materials are the content of the material presented in educational books that are prepared based on basic competencies based on the objectives to be achieved. Described by Devi, Sofiraeni, and Khairudin (2009, p. 13), that teaching materials need to be developed by teachers to support the achievement of students' competencies. The selection of effective teaching materials must be in accordance with the demands of the indicator so that it can increase the achievement of competence to the fullest. In line with the above opinion expressed by Prastowo (2013, p. 17), teaching materials are all materials (both information, tools, and texts) that are arranged systematically that displays the whole figure of competencies that will be mastered by students and used in the learning process with the aim planning and reviewing learning implementation. From this opinion, it is clear that the content in teaching materials must cover all the needs of students so that the achievement of learning objectives can be accommodated properly.

Based on the results of the measurement of the good effectiveness of the affected subjects, the Ciniru Elementary School students and the teacher's subject can be seen that the product has an effective category. So that the product can be said to have sufficient effectiveness in its use.

5. Conclusion

Based on the results of research and development of teaching material products based on ecological literacy, the empathy aspect can be summarized as follows: (1) The results showed that 1) aspects of knowledge in students had increased by 95% after using products of social studies teaching materials based on ecological intelligence aspects of empathy and lesson plan, 2) aspects of attitude had increased by 100% after using social studies-based teaching materials ecological literacy aspects of empathy and lesson plan, 3) aspects of skills have increased by 95% after using products of social studies teaching materials based on ecological literacy aspects of empathy and lesson plan, 4) percentage results of questionnaires on teacher opinion on social studies teaching materials score the highest percentage get the maximum score of 100%, 5) the percentage results of the teacher's opinion questionnaire on lesson score the highest percentage get the maximum score of 100%, and 6) Teaching materials and lesson plans are assessed by validators of material experts and media expert validators to obtain feasibility data for teaching materials and lesson plan developed, namely (a) the result of the range between the number V obtained in the teaching material is 0.925 the average Aiken's V score is between 0 and 1.00, the validator table can be interpreted as a coefficient that is high enough for each indicator on teaching materials; (b) the result of the range between the number V obtained in the RPP is the number 0.908 the average Aiken's V score that is between 0 to 1.00, so in the validator table can be interpreted as a coefficient that is high enough for each indicator in the RPP; (2) The product produced in this study is a teaching material based on ecological literacy which is an empathy aspect that can be used by teachers and students as a learning resource in learning social studies in fifth grade elementary school. Based on these conclusions, the following are suggested: (1) After the development of instructional materials is expected to be an effort to produce elementary school social studies teaching materials at other, better and more interesting levels; (2) Widespread use and motivating elementary school teachers in Kuningan District to improve the quality of social studies learning, the results of this research and development can be disseminated or delivered in the KKG (Teacher Working Group) forum in the fifth grade elementary schools in each District in Kuningan District, West Java.

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