

Development of Teaching Material Supplement for Geography Subject Based on Local Wisdom of Kaili Da'a in Sigi Regency, Central Sulawesi

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Abstract.

The aim of the research was to develop a supplement of teaching materials for class XI geography subjects based on the local wisdom of the Kaili Da'a tribe in Sigi Regency, Central Sulawesi, which is valid and feasible. Before developing the supplement of teaching materials, first make preparations, namely: (1) Kaili Da'a research community in Dombu village, Marawola Sub district, Sigi Regency related to local wisdom values that are relevant to the geography material of XI high school class. (2) Examines the Content Competency, Basic Competence, Teaching Material and values of local wisdom that can be implemented in the geography learning materials of class XI high school. Teaching material supplements developed were validated by material experts and linguists. Products validated by material experts and linguists show a percentage of 85% with qualifications that are very suitable for use, after which a revision is made. The revised teaching material supplement was then tested for eligibility in small groups. The small group was 20 students of SMA 4 Sigi, 20 students of SMA AL-Khairat Kalukubula, and 20 students of SMA 2 Sigi. The results of the feasibility test in the small group were 86.15% for SMA Negeri 4 Sigi, 87.30% for SMA AL-Khairat Kalukubula and 86.73% for SMA Negeri 2 Sigi. These percentages respectively showed that the results of the development of teaching material supplements received responses. Positive and qualify as eligible to be used as a supplement of teaching materials.

Keywords: Handout geography Supplement, Local Wisdom of Kaili Da'a

I. INTRODUCTION

The purpose of education is to form decent human beings, capable and democratic citizens who are responsible for the welfare of society and the motherland [1]. The purpose of education is to develop capabilities and shape the character and civilization of a dignified nation in order to educate the life of the nation. National education aims to develop the potential of students to become human beings who believe and fear God Almighty, noble, healthy, knowledgeable, capable, creative, independent, and become democratic and responsible citizens [2]. Therefore, national education emphasizes the formation of national identity which is realized through the emphasis on social and cultural aspects [3]. One manifestation of the formation of a national identity is the application of local wisdom education into learning materials in schools. Formation of character through the application of local wisdom in learning

materials will foster a spirit of love for the motherland for students because it is contextual and in accordance with the experience of students [4].

Globalization advances in science and technology change various aspects and order of life both education, communication, transportation, trade, and social culture [5]. Advances in science and technology make global interactions practical and easy. This is a challenge for education in Indonesia because it allows the entry of foreign cultures that can crush local culture [6]. Culture foreigners who enter without a correct filter can change the lifestyle and mindset of students. If local culture is displaced by foreign culture can lead to the blurring of national identity [7]. This can result in the growth of negative attitudes such as materialism, hedonism, and individualism will have a negative impact on the Indonesian people in general and regions in particular. Local wisdom is one effective step to filter global culture. Local wisdom is part of culture, local wisdom is substantially the values that apply in a society, the values that are believed to be true and become a reference in nature of local people's daily behavior [8]. Local wisdom is a view of life and science as well as a variety of life strategies in the form of activities carried out by local communities in answering various problems in meeting their needs. Local wisdom can also be interpreted as a system that can regulate the social, economic, political, cultural, economic, and environmental lives of people living in local communities. A person's attitude and outlook grows and develops influenced by the development environment, and social interactions, and the conditions or situations that they face [9].

One of the ethnic groups that still uphold the values of local wisdom is the Kaili Da'a tribe in Sigi Regency, Central Sulawesi Province. The Kaili Da'a is one of the Kaili tribes in the mountains. The local culture owned by the Kaili Da'a tribe is still very thick. The Kaili Da'a tribe still upholds ancestral culture and still upholds customary rules. The life of the Kaili Da'a tribe is based on the cultural heritage of their ancestors [10]. Kaili Da'a local culture as the value of local wisdom can help maintain the cultural value of the nation as a national identity that is not shared by other nations. The thickness of Kaili Da'a culture is very suitable to be studied in the study of geography which is in this case it can be developed as a teaching material for geography in supplement form [11]. The purpose of developing teaching supplements with the theme of local wisdom of the Kaili Da'a tribe is so that students are able to recognize their identity as citizens of Central Sulawesi, Sigi District, especially those who have cultural assets that can be used as basic capital in national development. So, despite having entered the era of globalization, but do not forget the local culture which is the identity and national identity.

The learning problem that occurs especially in the learning process in Sigi District is that teaching teachers tend to be oriented to the mastery of the textbook material with a measure of success tends to how capable the students master the contents of the textbook [12]. Even though the textbooks they are using are general or not yet contained local wisdom values. The main problem of learning in Sigi District is

that there are no teaching materials in geography subjects whose material is in accordance with the local conditions of the students. This means that the learning process of geography is not contextual. One of the threats from globalization is the fading of the values and culture of local communities because of imitating or applying it to cultures outside Central Sulawesi or foreign cultures, this can cause local wisdom to be eroded. Based on the problems experienced by these students, it is very urgent to implement the values of local wisdom in learning geography. This is an effort to organize contextual learning of geography and defense efforts against the negative effects of globalization that can erode the values of local wisdom. So the development of supplementary teaching materials on geography subjects based on local content is very necessary to overcome the problem [13].

Based on syllabus and lesson plans, one of the core competencies of Geography subject in Class XI is to understand applying analyzing factual, conceptual, procedural knowledge, based on curiosity about science, technology, art, culture, nationality, civilization related to the cause of phenomena and events, and apply to specific fields of study. From these core competency standards, some basic competencies are elaborated. One of the basic competencies is to analyze the diversity of national culture as a national identity based on uniqueness and distribution. Then the learning material is the distribution of cultural diversity, preservation and utilization of cultural products in the creative and tourism fields. Based on a study of Core Competencies, basic competencies in the 2013 curriculum and learning materials for the preservation and utilization of culture and natural resource management especially in a wise manner, the local wisdom values of the Kaili Da'a tribe can be integrated in competencies and learning materials in class geography subjects XI through the development of teaching material supplements.

II. RESEARCH METHOD

This research was carried out in Sigi Regency, Central Sulawesi by selecting locations in Dombu Village, Sibedi Village and Porame Village. The consideration of taking research locations in the three villages is because most of the populations are the Kaili Da'a. Schools as product testing facilities are SMA 4 Sigi, AL Khairat Kalukubula High School and SMA 2 Sigi. The selection of the school is based on the location of the school close to the three research villages and most of the students are the Kaili Da'a and the study was conducted in September to October 2018. This type of research is development research. The development model used in the development of teaching material supplements is the version of Borg & Gall (1984) of the procedural model. The main characteristics in research and development, namely [14]: 1) preliminary research, 2) developing products based on initial findings, 3) conducting field trials, and 4) making revisions to correct the weaknesses found in the test try. This research begins by exploring the values of local wisdom that are relevant to geography learning which is then made a supplement of teaching materials. Obtaining data on the

values of local wisdom was taken in the Dombu Village, Sibedi Village and Porame Village, Sigi District through interviews and documentation. This research used the development of supplementary teaching materials on geography based on local wisdom with the theme Kaili Da'a Local Wisdom Culture in Natural Resources for Food Security.

III. LITERATURE REVIEW

Based on the review literature used in this study, for more details related to this literature review will be elaborated into the following sections:

General Description of the Kaili Tribe

The Kaili Da'a in their lives maintains harmony and social order between humans and humans and between humans and the natural environment and between humans and their ancestors. Da'a means no, so some people understand this understanding as an attitude of rejection of colonialism and oppression [10]. The Kaili Da'a people believe that they came from land that came from the Gawalise Mountain. Indigenous peoples have regulations that are not written down but are collectively understood and obeyed. The purpose of obedience and obedience to customary law is to create harmony and harmony in life. The regulations contained in customary law are divided into beliefs, life cycles, livelihood systems, languages, arts, social government organizations. The Kaili Da'a indigenous community as a system contains three sub-system parts in it, namely: (1) environmental engineering sub-system namely how humans adapt to the environment, obtain food, mobilize their resources, use tools and how to distribute goods, (2) ideological sub-systems include beliefs, mythical values, legends, music, arts, dances, and all components of ethnic culture, (3) socio-political sub-systems that see the relationship between one individual and other individuals in one certain cultures.

Local Wisdom Values of Kaili Da'a Relevant as Geographical Learning Resources

The local wisdom of the Kaili Da'a tribe has values that can be used as a source of Geography Learning, namely religious, loving the environment, mutual cooperation, obedient and noted in customary regulations. Kaili Da'a people believe in a God called *Puelatala* and embrace Christianity or Islam. In addition, the Kaili Da'a tribe believes in the existence of supernatural powers that determine the life of a person called *Tomaru* who is said to have power beyond human ability. According to the Kaili Da'a in every aspect of life or things believed to have the power of *Tomaru*. Besides that, the Kaili Da'a people believe in ancestral spirits or are called *Wiyata*. The Kaili Da'a tribe has a philosophy of life which has been passed down from generation to generation. The philosophy reads *Land Indoku Ummaku Langi* meaning the land is my mother, the sky is my father. This confirms that land is a natural resource which is very important in providing life for humans. All land in the Kaili Da'a tribal area is customary land, so that when opening or managing land one must help each other and

manage natural resources wisely and sustainably. For example the time limit in managing a land, after a certain time limit the Kaili Da'a tribal people leave the land untreated so that the land returns to fertility. It also adheres to customary rules that may not clear forests in the peaks and near rivers. In the activity of managing natural resources, the community carries out together. Group work or mutual cooperation is called *No'unu* and *Mobati* is community service. In *mobati* if there are people who have not been able to participate in mob three times, they can be fined, namely giving one chicken. *No'unu* is a way of working together with a certain room, for example opening a garden or forest, planting, maintaining plants, picking results and so on. In farming activities, the Kaili Da'a people obey all customary rules even though only verbally.

Study of Core Competencies, Basic Competencies in the 2013 Curriculum Are Associated with the Local Wisdom Values of the Kaili Da'a

Based on a study of Core Competencies and Basic Competencies in the 2013 curriculum [15], the values of local wisdom of the Kaili Da'a tribe can be integrated in the Core Competencies and basic Competencies in class XI on the theme local wisdom culture of the Kaili Da'a tribe in natural resources for food security. The description and explanation of the core competencies and basic competencies are as follows: 1) core competencies is to live and practice the teachings of the religion they hold and the basic competence is analyzing the distribution and management of forestry, mining, marine and tourism resources according to the principles of sustainable development. The Example of the local wisdom is *No'unu* and *Mobati* Customary Law; 2) Core Competencies is To live and practice honest behavior, discipline, responsibility, care (mutual cooperation, cooperation, tolerance, peace), polite, responsive and pro-active and show attitude as part of the solution to various problems in interacting effectively with social and natural environment and in placing themselves as a reflection of the nation in the world association and the basic competence is to show the attitude of responsibility in preserving the surrounding environment and analyzing national food security, supply of industrial materials, as well as the potential for new and renewable energy in Indonesia. The Examples of local wisdom is customary law and Abstinence; 3) The core competencies is understanding, applying, and analyzing factual, conceptual, procedural, and metacognitive knowledge based on curiosity about science, technology, art, culture, and humanities with human, national, state, and civilization insight related to the cause of phenomena and events, as well as applying procedural knowledge in specific fields of study according to their talents and interests to solve problems. The basic competence is analyzing forms of local wisdom in the utilization of natural resources in agriculture, mining, industry, tourism, and also evaluates appropriate actions in environmental preservation in relation to sustainable development. The Examples of local wisdom is Customary law, *Kamaling*, traditional mechanisms in natural resource management; 4) The core competencies is cultivate,

reason, and serve in the realm of concrete and abstract domains related to the development of what they learn in school independently, act effectively and creatively, and be able to use methods according to scientific principles. The basic competence is present an analysis of cultural diversity nation as a national identity in the context of global interactions in the form of map drawings Presenting examples of wise actions on the use of natural resources in agriculture, mining, industry, and tourism in the form of papers or forms. The examples of local wisdom are customary law, Customary Ceremonies regarding Land Management to Post Harvest: *Mompepoyu, Mantalu, Mampakoni Puenggayu, Matovo, Mantilomba, Motamba, Motamba Ridombu, Monaso, Masambulu, Montuvu, Movae.*

IV. DISCUSSION

There are four main point regarding this discussion about Development of Teaching Material Supplement for Geography Subject Based on Local Wisdom of Kaili Da'a in Sigi Regency, Central Sulawesi, for more details related to this discussion will be elaborated into the following sections:

Material Expert Validation

Teaching material supplement products developed in accordance with the eligibility criteria are validated from various aspects namely material and language. The results of the validation take the form of assessments, input and suggestions for teaching material supplement products. At the material validation stage, the validator provides assessments, input and suggestions related to the shortcomings and weaknesses of the teaching material supplements that are developed. The response from the expert validation of the material listed in the questionnaire, suggestions and comments became the basis for improvement in the product development of teaching material supplements that have been developed. The results of the material expert's response are contained in several statements that must be revised and refer to the quantitative assessment in the questionnaire. The advice and input given by material experts is that it is necessary to add more and adapt examples of local wisdom to geographic material. Responses that are quantitative can be seen from the assessment used by the validator through the instruments that have been provided. The total score of the answers to the questions from the content of material validation expert is 69. Based on the tabulated data, it can be explained that the level of content material expert achievement of the class XI teaching material supplement products with the theme Culture of Local Wisdom of the Kaili Da'a Tribe in the Sources Natural Power for Food Security = $(69:88 \times 100\%) = 78.41\%$ of the expected 100%. This shows that the teaching material supplement products can be declared to have met the eligibility criteria which are at a reasonable level. Products that have been declared feasible cannot be fully trialed, but must still pay attention to the revisions suggested by the validator as a means of improvement.

Validation of Linguists

Language validation is one step that is needed by researchers in the development of teaching material supplements. That was caused, because legibility was the main goal of developing teaching supplement supplements. Basically with the using of good and straightforward language it can give impact to the interests of users. The total score of the answers obtained from the results of the validation of linguists is 59. Based on these data, it can be concluded that the level of achievement according to linguists on the product development of teaching materials = $(59:80 \times 100\%) = 73.75\%$ of the expected 100%. This shows that the product supplement of teaching materials in terms of language can be stated to have met the eligibility criteria which are at a reasonable level. Products that have been declared feasible cannot be fully trialed, but must still pay attention to the revisions suggested by the validator as a means of improvement. Inputs and suggestions from linguists become the basis for renewal in writing the developed book. Some errors were found that must include the learning objectives at the beginning after writing the chapter. This is done for direction in learning, writing, uppercase, lowercase, italics, bold writing and some paragraphs whose narrative is not coherent to improve the sentence.

Product Revision after Expert Validation and Language Validation

Teaching material products are developed and arranged according to the criteria and needs of students. Achievement of the product is passed through several stages of revision to reach a level more suitable for use. The revision was carried out in several stages. The first product revision is done after the product has been validated by several experts. The first revision was made based on expert review of the material, and language. The results of the review obtained in the form of assessments and important notes in the form of suggestions and criticisms about things that need to be improved. Some important notes after the validator's review include suggestions related to some important parts including the cover, introduction, material content, language, and design of layout and image selection.

Readability Test Analysis and User Attractiveness

Results of the revision of teaching materials that have been validated by material and language experts are then tested on students as test subjects. At the field trial stage a small group is conducted to obtain responses to the level of readability and interest in the teaching material supplement product developed. To obtain responses and perceptions from students, instruments in the form of a validation 1 questionnaire were used in the form of typing errors analysis, errors in the use of punctuation marks, and errors in capital and lowercase letters. Furthermore, the validation questionnaire 2 consisted of 13 questions by giving a checklist in the column provided. Next, to find out the level of understanding of students towards teaching material supplement material, the training questions are tested on the development of geography teaching material supplements. The assessment of students is used as input for revision of the perfection of teaching material supplements. The response from the trial through a

small group with the number of respondents 20 student of SMA 4 Sigi, 20 students of SMA AL Khairat Kalukubula, and 20 students of SMA 2 Sigi showed that the test subjects responded well and agreed to the teaching material supplement products developed. Thus, the teaching material supplement product developed has received a positive response from students both the content and design aspects of the display and the beauty of the language.

The scale used to analyze data uses a Likert scale and its determination depends on the ideal score and the lowest score. The answer criteria for each question in the questionnaire are four answer choices. The number of scores obtained for small group trials is SMA Negeri 4 Sigi = 448, SMA AL-Khairat Kalukubula = 454 and SMA Negeri 2 Sigi = 451. Based on these data it can be stated that the level of respondents' approval of teaching material products developed by SMA Negeri 4 Sigi = 448: $520 \times 100\% = 86.15\%$ of the expected (100%), SMA Al-Khairat Kalukubula = 454: $520 \times 100\% = 87.30$, and SMA 2 Sigi = 451: $520 \times 100 = 86, 73$. This percentage is based on a conversion table the level of achievement and qualifications are at an eligible qualification. Then a revision is made to produce a product that is suitable for use in learning. Based on comments and suggestions from students, it shows that the supplement products for teaching materials that are developed are interesting and can be understood from the delivery of their contents, designs, and readability. Products that have been tested by small groups of students get very decent qualification results.

V. CONCLUSION

Local wisdom of the Kaili Da'a tribe has values that can be integrated in learning Geography through the development of teaching material supplements with the theme Kaili Da'a Local Wisdom Culture in Natural Resources for Food Security these values are religious, loving the environment, mutual cooperation, obey and note on customary rules. Supplements of teaching materials that have been developed are of very reasonable qualifications. Based on the comments and suggestions from students the teaching material products developed are interesting and can be understood from the delivery of the contents, as well as their readability. The results of the development of teaching material supplements are expected to be used as a source of learning by geography teachers in Sigi District so that students continue to learn local wisdom in the modern era as a filter against globalization.

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