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Developing A Supplementary Book About The Potential and Utilization of Natural Resources for Social Studies Lesson

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Abstract

Social studies subject is one of complex and broad lessons for students. This subject is considered as one of the most difficult subjects by students. This researcher, then, aims at developing a supplementary book to support the learning process of Social Studies. This research and development employed a modified Borg and Gall model (consisted of nine major stages). The assessment of the developed product was obtained from expert validators and field trials. The validation from the expert validators concluded that the developed supplementary book is feasible to be applied. In addition, the field trials confirmed that the developed supplementary book is practical to be used and it is able to improve students' learning outcomes.

How to Cite

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INTRODUCTION

Teaching activities are one of the important components in the national education system. According to Siddiq (2008) learning is an activity carried out by a teacher to teach and transfer certain knowledge to students. The quality of education depends on how the learning process is carried out in an education system itself (Sunaengsih, 2016). Neina et al. (2015) stated that the delivery of the contents of lesson topics in accordance with the subjects being taught is an important aspect for teachers to perform. From a psychological point of view, the level of difficulty of contents that are transferred and delivered for students must be designed by taking into account the intellectual characteristics and development of students. As a reciprocal effort between teachers and students to share and process information, it is expected that the knowledge conveyed will benefit students and plays a role as a fundamental principle for continuous learning.

A policy and regulation reformation performed by the government have made a great deal of changes to the learning system in schools. Efendy et al., (2018) stated that the curriculum changes made by the government from KTSP (Educational Unit Curriculum) to the 2013 Curriculum made the lesson contents underwent numerous changes. The 2013 curriculum on social studies subject which consists of several basic disciplines such as Geography, Economics, Sociology, and History are integrated into a one lesson that is adjusted to the philosophy of science in learning, in other words it is exclusive to Integrated Social Studies Learning. The objectives of the Social Sciences subject as stated in the Regulation of the Minister of National Education Number 22 of 2007 are expected to provide students a basic ability to think logically and critically, develop student's curiosity, inquiry, problem-solving skills, and social skills for social life. Furthermore it is in line with Rosidi (2016) that the goals of national education can be achieved through numerous activities, one of which is the Social Studies learning activity, which is intended to provide student a knowledge understanding and development, to promote positive values, attitudes, social skills and encourage them to be able to reflect on the life of the community, as well as state. It is further confirmed by Hendarwati (2013) that in delivering Social Studies lesson, the goal will be achieved if the learning process is developed and designed by encouraging the development of students' creativity.

Yaba (2006) argues that Social Sciences is a science that combines a number of selected concepts from the branches of social disciplines and other related sciences and is then processed based on educational principles to be integrated as one teaching and learning program at the school level. In line with Darsono & Karmilasari (2017), Social Sciences is one of the subjects that study social life based on Geography, Economics, Sociology, History, Anthropology, Political Science, and so on by presenting the problems related to student's daily life occurring on the surrounding community. In addition, Social Sciences also aims at developing students' potential hence they will understand social problems that occur in society, developing a positive attitude towards correcting all inequalities, and promoting better problem-solving approach (Maryani, 2011). Therefore, the delivery of Social Studies lesson contents must take into account student's level of ability, hence the students are able to acquire the lesson effectively and significantly within the scope of the learning objectives to be achieved.

More importantly, Social Studies provide students to be able to understand the issue of multicultural diversity (Fitria & Wisudawati, 2018). This notion is indeed in line with the purpose of National Education stipulated by the central government. One primary objective of Indonesian National Government is to promote a comprehensive awareness about local culture and its diversity. Thus, through the development of the 2013 Curriculum, the government intends to integrate an attempt to promote an awareness about culture and science at the same time. Accordingly, students will have better awareness through the development of their knowledge. To promote better awareness of students about their surrounding environment and community, students can learn directly from the phenomena occurred. This is in line with the statement of Hanapi and Utaya (2018) who report that the surrounding environment of students can be a great learning resources to learn about surrounding environment and community. In addition, Hanapi and Utaya (2018) state that Social Studies which integrate local and regional perspective is an important lesson topic that teacher needs to take into account and pay attention.

The topics given to students are indeed an essential aspect. However, it also requires a suitable and representative instructional media to deliver the lesson contents to students. Thus, this research aims at observing the needs of suitable instructional media and further developing an instructional media to be used by teachers in the learning process. During the learning process of Social Studies, an understanding acquired by students is often incomplete and sometimes tends to be misleading due to inappropriate instructional media used by the teacher in the learning process. However, the purpose of instructional media is to assist and support the learning process. An instructional media is one essential element that should be applied to promote an easier knowledge acquisition by students to achieve the determined learning objectives. According to Taufiq (2014), instructional media is a form of instrument to support teacher in delivering and conveying lesson content. It further aims at encouraging student's interest during the learning process (Miarso et al., 1986). When teacher does not use any kind of instructional media and teacher only uses one textbook, it makes the learning process turns out to be monotonous and the information will not be delivered effectively since the students are bored with an unattractive lesson.

It is undeniable that every learning process in the classroom use textbook as its primary resource (Borolla et al., 2019). However, the use of textbook in the learning process must be comprehensively took into account. Unattractive textbook is indeed discouraging the student's motivation. Students tend to feel tedious when reading too much text in the textbook during the learning process. Furthermore, if the textbook does not directly explain the lesson contents by having a contextual explanation, the topics will be difficult to comprehend by students. Most Social Studies lesson textbooks offer a too broad lesson contents and do not focus on the specific scope and context. Hence, students cannot acquire specifically the context of the lesson content. Borolla et al. (2019) also suggest that in addition to textbooks, teachers are advised to use other books such as non-fiction supplementary books. Supplementary books are defined as books that contain lesson contents that can enrich and enhance mastery of science, technology, and art (science and technology) as well as skills in shaping the personalities of students (Desnita et al., 2016). Nuha and Pratiwi (2019) argue that supplementary books have a role to support and complement learning resources according to the needs of schools.

Therefore, a non-fiction supplementary book is needed as a learning support that can increase students' motivation in the learning process thus, they are more interested in learning Social Studies.

Based on the observation conducted to Social Studies teachers of seventh grade student of junior high school, the direction of Social Studies learning process tended to be monotonous and passive. As a result, students were difficult to comprehend the whole lesson content. The large amount of lesson contents in Social Studies is also a factor in the constraints of students and teachers. Too many contents included in Social Studies subject makes the learning process take more time than learning other subjects. The learning process is less motivated due to the lack of instructional materials that use the surrounding environment as a concrete example of learning, consequently teachers have difficulty in explaining the lesson content and also become the reason for students to get bored easily and passively with Social Studies learning. Meanwhile, Alimah et al. (2016) has revealed that students are more effective in their learning process if active cognitive structures reconstruct good experiences when interacting with natural phenomena and students' social conditions. Furthermore, Riyanto (2016) argues that instructional materials related to norms or values in each subject need to be developed, made explicit, associated with the context of everyday life.

In the interview with randomly selected seventh grade junior high school students, the researcher asked several questions about Social Studies learning related to environmental knowledge. Of the questions related to their own area raised by the researcher, only a few students could answer even though they were hesitant. This is a problem faced by students where their knowledge is limited about the content. This problem is caused by a lack of understanding of Social Studies learning from the learning process which does not take into account the real context of lesson content. Choiri (2017) defines the three primary knowledge resources of student, specifically the family environment, the school environment and the surrounding environment. Therefore, the surrounding environment also has a great contribution on students, especially in utilizing the surrounding environment resources.

Referring to the explanation of the background of the problem, the researchers attempted to develop supplementary books as an instructional material for Social Studies lesson. In the implementation of the development of this supplementary book product, the researcher conducted an in-depth study of the potential resources in the area around the school by referring to the curriculum of Social Studies subject. This major reasons in developing a supplementary book are: (1) there is no supplementary book that provides the local potential of the surrounding environment and (2) it is important to broaden students' insights about the lesson which is related to the environment around them and introduces students to potential in their surrounding environment.

Some previous research have been conducted to develop an instructional media. A research by Astra and Saputra (2018) was conducted to develop a supplementary book as a complementary instructional media for Physics subject. The research confirms that the development of supplementary book for Optical Instrument topic equipped with Augmented Reality is able to improve student's learning outcomes. In addition, Kusuma (2016) develops a supplementary reading material for primary school students about Tourism by integrating a local culture.

The development of reading material is considered effective to enhance student's understanding. A research and development by Maryam (2012) results a supplementary book to strengthen student's character education through local ethics from Indonesian Language. The development of supplementary books also performed by Rediati (2015), Rofiah et al., (2015), and Jayanti et al., (2015). The development results of supplementary books from the previous researchers above affirm that the media are able to support the learning process of students in the classroom.

METHOD

This research and development used a Research and Development Model suggested by Borg and Gall (1983). The researchers modified the model into nine stages which consisted of initial data collection, planning, early development, validation process, first revision, small group trial, second product revision, large group trial, and final product completion. The validation process involved three validators, specifically Lesson Content Validator, Media and Design Validator, and Language Validator. The validators observed the developed product and were asked to assess the product by using validation questionnaires. The assessment obtained from the validators was then processed and calculated to obtain the average score and then it was classified into a criteria of product validity. After obtaining the average score and suggestions from the validators, the product was revised. The first revision of product was tested during small group trial. The small group trial was conducted to the selected students as the research subjects. After obtaining the results from small group trial, then the product was revised according to the comments and suggestions from the subjects. The second revised product then was tested to the larger subjects in the large group trials. Lastly, the product was finalized based on the last stage of trial. The research process is presented in the figure 1.

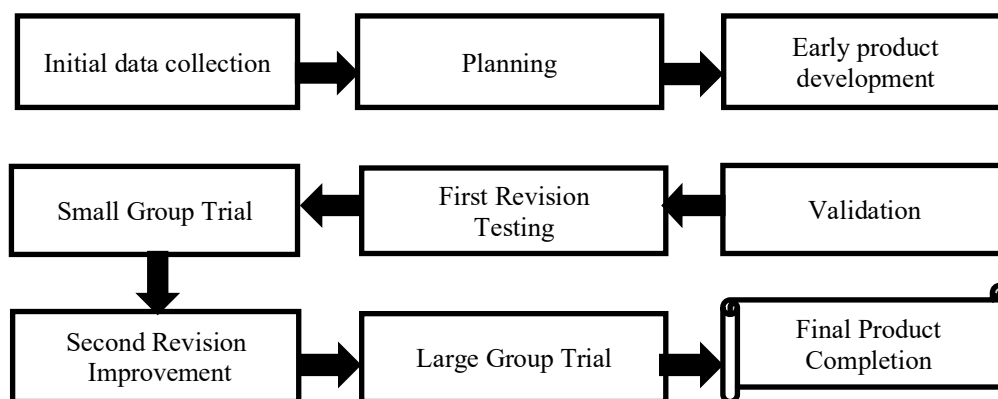


Figure 1. Research and Development Procedures

The obtained scores from the validators were calculated by using a formula suggested by Akbar and Sriwiyana (2016). The formula is presented as follows:

$$V - ah = \frac{TSe}{TSh} \times 100\%$$

Annotation:

V-ah: Expert Validity

TSe: Total Empirical Validator Score

Tsh: Total Expected Maximum Score

The calculated scores from the three validators were then classified into the category suggested by Akbar and Sriwiyana (2016). The category is presented as follows:

Table 1. Criteria of Product Validity

Obtained Percentage	Category	Remarks
81% - 100%	Very valid Very suitable Very Practical Very attractive	Feasible to be applied
61% - 80%	Moderately valid Moderately suitable Moderately Practical Moderately attractive	Require minor revisions
41% - 60%	Less valid Less suitable Less Practical Less attractive	Require major revisions
21% - 40 %	Invalid Unsuitable Impractical Unattractive	Inappropriate to be applied
0% – 20%	Very invalid Very unsuitable Very impractical Very unattractive	Inappropriate to be applied

RESULTS AND DISCUSSION

During the first stage of development, initial data collection, the researchers aimed at collecting the data regarding the needs for supplementary book development for Social Studies subject. The initial data collection observed the learning process that took place in the classroom. It examined the lesson contents that were given by the teachers during the learning process. It further examined the problems and issues during the learning process in the classroom as well as identifying the surrounding environment of students that could be taken as the supplementary lesson content for Social Studies subject. The results of the initial observation were then used as a basis for developing supplementary textbook for Social Studies subject.

The second stage was planning process. This stage generated a comprehensive plan and grand design of supplementary textbook that take student's surrounding environment as a learning resource. It designed a supplementary lesson content of Geography, Economics, History, Sociology, and other Social studies

disciplines that were connected to the surrounding environment of students. This stage, furthermore, composed a core competencies and basic competencies of Social Studies subject that must be achieved by students according to the applied curriculum. The stage of planning also composed a possible learning activity that could be integrated.

After completing the planning stage, the researcher moved into initial product development. The researchers developed an initial draft of the product, prepared suitable materials to be included such as related figure, image, graph, tables, and also maps. The initial draft was then printed and gave to the validators to be assessed. The validators involved in this research and development were Lesson Content Validator, Media and Design Validator, and, Language Validator. The validators assessed the product by using a questionnaire. Based on the results of validation process, the Lesson Content Validators gave a score of 53 out of 64 or amounted to 82.8 percent. This result indicated that the product developed was valid. Based on the results of validation process, the Media and Design Validator gave a score of 65 out of 80 or amounted to 81.25 percent. This result indicated that the product developed was valid. Based on the results of validation process, the Language Validator gave a score of 40 out of 44 or amounted to 90.90 percent. This result indicated that the product developed was valid. The following graph illustrates the assessment percentage obtained from the validation.

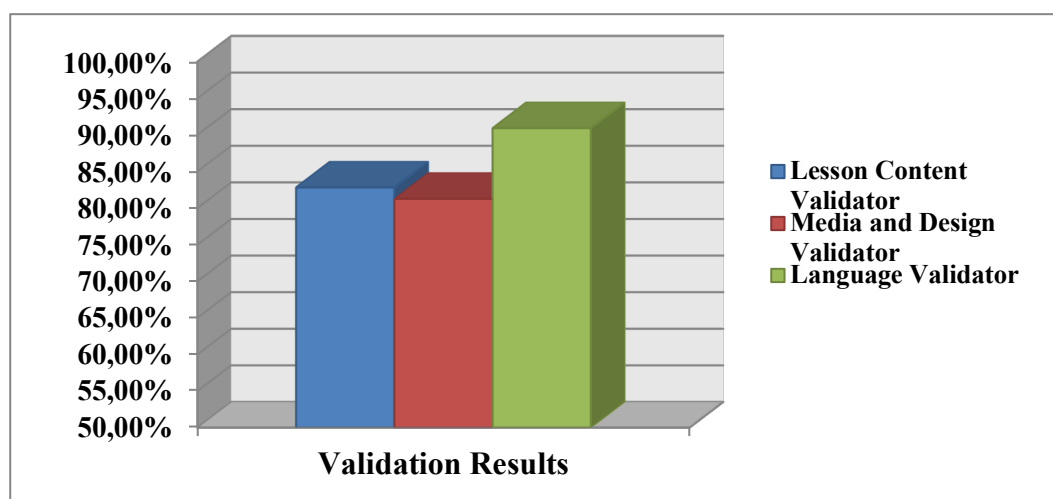


Figure 2. The Results of Experts Validation Process

The results of this research and development produced a supplementary book for Social Studied subject about The Potential Enrichment and Utilization of Natural resources around Tulungagung Regency. Based on the overall validation results from three validators, the developed product was confirmed valid to be applied in the learning process.

After obtaining the validation results, then the developed product was revised based on the suggestions and comments from the three validators. The revisions were related to the content presentation, design, and language used in the supplementary book. The revisions must be completed before performing the small group field trial to the selected subjects as a prospective user of the product.

The small group field trial was conducted to six students of seventh graders of junior high school as the research subjects. The subjects were asked to fill a questionnaire to assess the product. The average result of small group trial was 87.77 percent. The result was then confirmed that the developed product is feasible to be applied and attractive to be used in the Social Studies lesson. Afterwards, the developed supplementary book was revised based on the suggestions provided by the six selected subjects at the small groups trial. The second revision produced a second developed supplementary book. Then, after the second revision completed, the supplementary book for Social Studies subject about the Potential and Utilization of Natural Resources around Tulungagung was tested in the large group field trial. The large group field trial involved 26 students of seventh grade of Junior High School. During the large group field trial, it consisted four steps, specifically pre-test, first and second meetings, and post-test. This stage aimed at identifying a practicality of the developed supplementary book for Social Studies subject about the Potential and Utilization of Natural Resources around Tulungagung. This stage also involved the subject teacher. Both students and teacher as the subjects of large group field trial provided assessments regarding the practicality of the developed product by filling the distributed questionnaires. The results of the average score of students' responses to the practicality of the supplementary book were 47.53 from the maximum total value of 53, with a percentage of 91.42. The criteria of practicality obtained for supplementary book for Social Studies subject about the Potential and Utilization of Natural Resources around Tulungagung are stated to be very practical. The questionnaire responses to the practicality of supplementary book for Social Studies subject about the Potential and Utilization of Natural Resources around Tulungagung were also given to Social Studies teachers to measure the practicality. The result of the practicality on the supplementary book for Social Studies subject about the Potential and Utilization of Natural Resources around Tulungagung was 75 out of the total score of 80. The overall average percentage obtained was 93.75 percent. Based on the practicality criteria, the percentage is included in very practical criteria. The results are presented in the following figure.

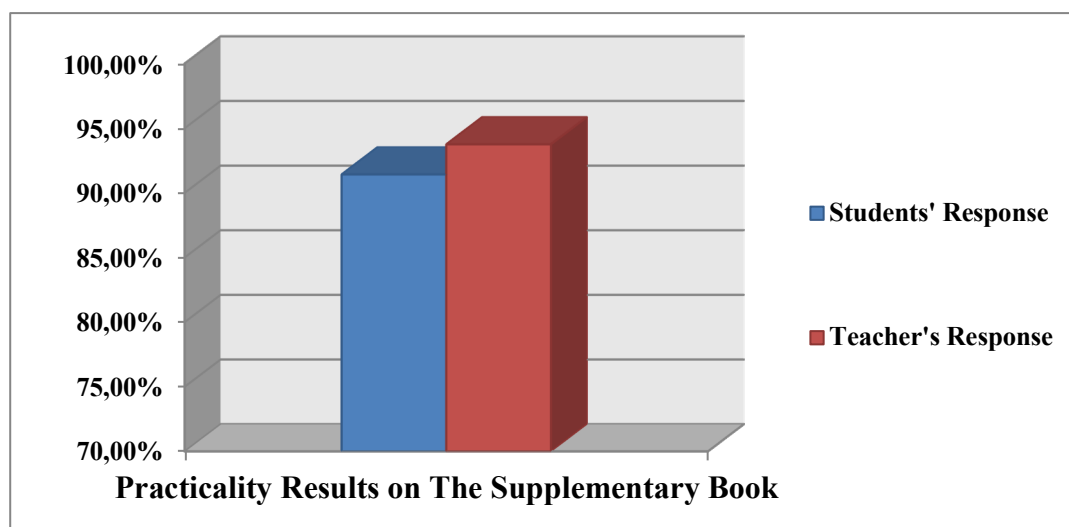


Figure 3. The Results of Large Group Trial

During the large group trial, the researchers also examined students' learning outcomes after using the supplementary book. It is known that the mean of the pre-test and post-test results has increased. The pre-test score of 26 students obtained the highest score of 87 and the lowest was 50 with an average score of 72.4. The assessment of this test has increased after the use of the supplementary book by 12.1 percent in the post-test results of students with the highest score of 95 and the lowest of 65 with an average value of 84.5. This shows that the level of student learning in Social Sciences learning has increased and is declared complete in learning.

After completing the large group trial, the researchers moved to a final product revision. The final product revision was performed based on the suggestions and comments given during the large group trial process. The final product revision produced a supplementary book for Social Studies subject about the Potential and Utilization of Natural Resources around Tulungagung.

CONCLUSION

This research and development produced the instructional material in the form of a supplementary book for Social Studies subject about the Potential and Utilization of Natural Resources around Tulungagung as a learning resource for Social Studies. The book was developed based on the RnD (Research and Development) development model. From the results of the validation examination by Lesson Content, Media and Design, and Language validators as well as the results from small group and large group trials, it confirm that the supplementary book for Social Studies subject about the Potential and Utilization of Natural Resources around Tulungagung meets the criteria of being valid, interesting, practical and effective and can be applied to learning activities as a supplementary book or learning supplement. The use of this supplementary book is very effective to be used by students to increase their understanding. It is further shown by the score of learning outcomes obtained by students during the large group trial.

To sum up, this research suggests that the developed supplementary book is feasible to be applied during the learning process of Social Studies. For the future research, it is suggested that the future researchers can develop more diverse instructional materials to support student's learning process. It can be in the form of e-books or interactive multimedia that is accessible for students and able to attract student's attention in learning. Furthermore, the trials could be conducted to wider subjects to obtain more valid results.

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