# Development of Teaching Materials Based on Local Excellences of South Sumatera for Science Learning in Elementary School

*by* Mazda Leva Okta Safitri

**Submission date:** 20-Aug-2024 11:40AM (UTC+0700)
**Submission ID:** 2434421140
**File name:** nt_of_Teaching_Materials_Based_on_Local_Excellences_of_South.pdf (390.39K)
**Word count:** 5702
**Character count:** 29288

Jurnal Penelitian dan Pembelajaran IPA JPPI
Vol. 4, No. 1, 2018, p. 35-50 p-ISSN 2477-1422 e-ISSN 2477-2038

# Development of Teaching Materials Based on Local Excellences of South Sumatera for Science Learning in Elementary School

(Received 28 February 2018; Revised 17 April 2018; Accepted 31 May 2018)

**Suratmi Suratmi[1*], Laihat Laihat[2], Didi Jaya Santri[3]**

[1,2]Department of Biology Education, Faculty of Teacher Training and Education,
Universitas Sriwijaya, Palembang, Indonesia
Corresponding Author: *suratmi@fkip.unsri.ac.id

[3]Department of Elementary School Teacher Education,
Faculty of Teacher Training and Education, Universitas Sriwijaya, Palembang, Indonesia

**DOI: 10.30870/jppi.v4i1.3336**

**Abstract**

This research is aims to develop the local excellences-based teaching materials of South Sumatera for science learning in elementary school. This teaching materials are designed and manufactured with local pre-eminent items in South Sumatra and adapted to the subject matter taught in science learning in elementary school. This research is a development research using ADDIE development model and Tessmer evaluation method. The development stages in this research include analysis, design, development, implementation, and evaluation. Evaluation of prototypes is conducted by: self evaluation, expert reviews, one-to-one evaluation, small group evaluation, and field test evaluation. Prototypes are validated by experts in materials, constructs, language, and media. The instruments used are questionnaires, observation sheets, test results and product assessment sheets. The result of the research shows that the teaching materials based on local excellences of South Sumatera are valid and after being tested in one to one, small group evaluation, field test evaluation of this teaching materials are considered practical. In conclusion, the teaching materials based on local excellences of South Sumatra are feasible to be used for science learning in elementary school.

Keywords: Teaching Materials, Local Excellences, Science in Elementary School

## INTRODUCTION

Science is one of the main subjects in the curriculum of education in Indonesia, including at elementary school level. Science acquired and developed through a series of activities undertaken by scientists in searching for answers "what?", "why?" and "how?" of natural phenomena as well as in their application in technology and daily life. For that, in science learning is not about knowledge alone but also related to the process. In essence, science consists of three components, namely science as product, science as a process and scince as a scientific attitude. science as a process involving the process to obtain the result (product) which then expected to form a scientific attitude.

Science is a combination of biological sciences, physics and chemistry is seen as one of the difficult subjects. The presumption that this science subject is difficult is shown from the results of National Examination in primary and secondary school students every year is always lower than other subjects. According to Susanto (2013), one of the facing education world today is weak implementation of learning process applied by teacher at school. The learning process during this less able to develop the thinking ability of students. Implementation of the learning process in the classroom is only directed at the ability of students to memorize information, students' brains are only forced to remember and to accumulate many information without being required to understand the information obtained to connect with the situation in daily life.

Efforts to improve the quality of the learning process, one of them is by using the appropriate teaching materials. Results of reflection of science subjects in the Primary School Teacher Education Program, the teaching materials subjects of science learning in elementary school is still text books oriented. The textual material of book oriented text provides examples that match the content of the book. The lectures take place by conveying theories and lacking equip local phenomena in science learning in elementary school. The result is poor with examples that exist around the daily lives of students. Lectures take place only in the form of information transfer and students difficult to understand. In addition to elementary school teachers are also difficult to find teaching materials specifically contain local excellences of a region, such as local excellences in South Sumatra.

To overcome this gap, it is necessary to develop teaching materials for the subjects of science learning in elementary school by loading elements

of local excellences of South Sumatra. Local excellences are the potential of an area to become a valuable product or service and can supplement regional income and is unique and has a competitive advantage (Ahmadi, et al., 2012). South Sumatra is one of the provinces of the island of Sumatra which has an area of 91,806.36 km2. South Sumatra is a maritime region that becomes a strategic province by utilizing the local potential that exists from every city or district. Based on Permendagri No. 18 year 2013 in Provincial Goverment of South Sumatera (2014) explain that South Sumatra Province is administratively divided into eleven regencies and four cities, as well as 228 districts. The size of the area and the number of towns and districts in South Sumatera region each have local potential that different each other.

According to the South Sumatra Province (2015), there are many local potentials that can be used as investment potentials such as mining and energy, agriculture, plantations, geothermal, forestry, tourist attraction, livestock and ground water. Excellences of South Sumatra Province not only comes from natural factors such as natural resources but many local potential that comes from cultural aspects include custom homes, traditional clothing, traditions, dances, special foods and even historical places in South Sumatra.

Teaching materials that will be developed for science learning in elementary school is teaching materials in the form of textbooks whose content will be adapted to the demands of the elementary school curriculum. So it needs to be conducted an innovations related to the concept of science which is taught in science learning in elementary school. Teaching materials so far are commonly used in the process of science learning in elementary school in the form of material sourced from textbooks from the book teachers and student books commonly used by schools. The ordinary teaching materials with these characteristics are common, for example practicum can be done if it has the tools and materials are adequate. The fact is when teachers teach at school not all schools have the same facilities. For that, we need to develop teaching materials that contain local excellences in the region.

Santoso (2010) shows that the self-concept of students can be developed through education based on local excellences as a model of character education and nation culture in global era. Another study conducted by Wuryandani that one way that can be done to preserve the local culture in elementary school, teachers can

integrate the values of local wisdom in learning. Laksana, et al (2016) has developed a themed materials based on local wisdom of Ngada's community, but for the development of materials based on local excellence South Sumtera no one has done.

Duncan (2014) in his research stated that the initial experience of students became the basis for learning. Teachers with different cultures with students are more difficult to provide a learning experience that is appropriate to the cultural context. In addition, other findings are also expressed by Laksana and Wawe (2015), that science learning with the help of media, especially local culture-based media shows satisfactory results. Increased student learning activities are accompanied by strengthening understanding of the concept of science. Thus the study of local culture must be integrated in the learning materials as an effort in improving the quality of learning.

In addition, the results of the survey with science teachers who are members of Deliberation Teachers Subject Ogan Ilir in the preparation of teaching materials in the form of student's work sheet 100% independently stated never to include local potential of South Sumatra in the preparation. As many as 79% of teachers do not know what are categorized as local potentials in South Sumatra (Suratmi, 2016). Based on the background that has been disclosed, it is necessary to develop the teaching materials for science learning in elementary school based on local excellences of South Sumatra.

Based on the background that has been presented, then the formulation of the problem in this study is how the feasibility of teaching materials based on local excellences South Sumatra for science learning in elementary school.

**METHOD**

This research has been done at the Department of Elementary School Teacher Education, Faculty of Teacher Training and Education, at one of University in Palembang, Indonesia and one of Elementary School in Palembang, with research time for 1 year. The subject of this research is the students of grade V Elementary School academic year 2017/2018. The research method used is research development. The development procedure used in this study is based on the development model of ADDIE (Morrison, et al, 2012) using formative evaluation methods (Tessmer, 2005). Thus, the research procedure is performed according to the flow chart shown in Figure 1.

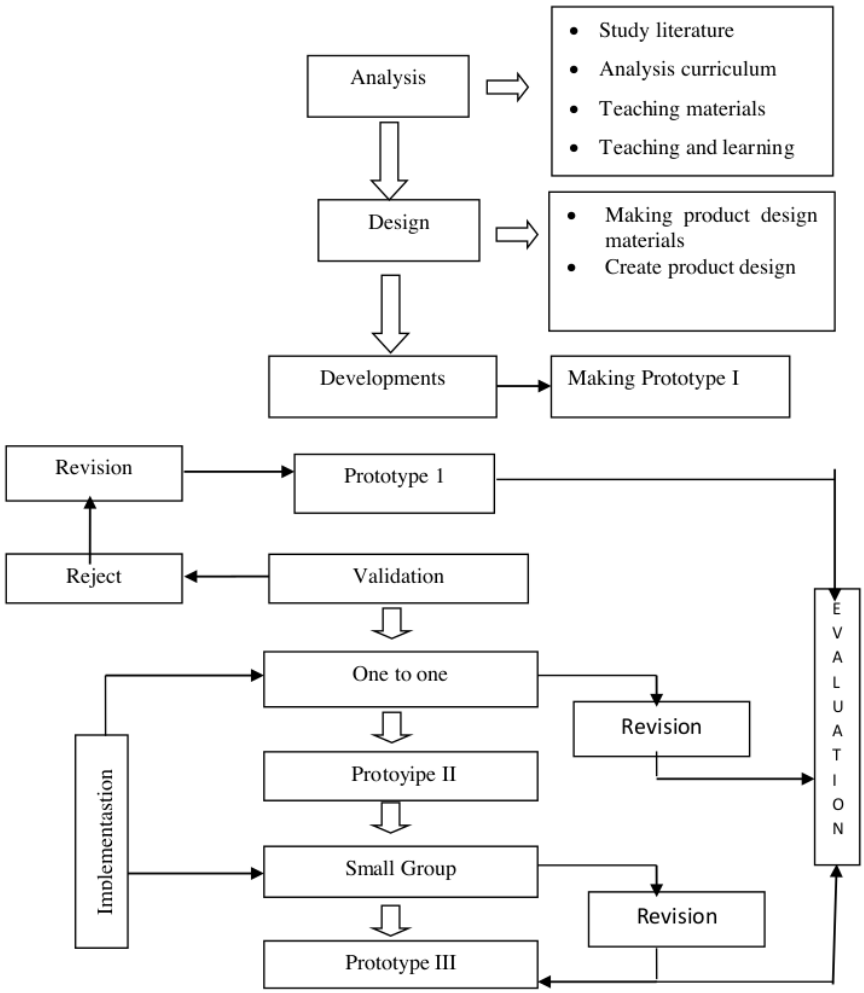


Figure 1. Flow Chart of Research Activities Development of Teaching Materials

Techniques data collection in this study is to use the following instruments:

1. Product Rating Sheet

The product assessment sheet that will be used in this study aims to determine the quality of the resulting product. Product assessment sheets are developed based on aspects that will be developed that include material aspects, constructs, language and media. This product assessment sheet was used as a validator in assessing the quality of the local-based teaching materials generated in this study.

2. Questionnaire

Questionnaire to be used aims to determine the response of students to the

quality of teaching materials produced. The questionnaire will be used in the One-to-one Evaluation, Small group evaluation and Field Test Evaluation.

3. Test the Learning Outcomes

The test of learning outcomes that will be used aims to determine the learning outcomes of students after following the lesson with materials based on local excellenes of South Sumatra. The test of this learning result is done at Field Test Evaluation stage.

The data obtained were analyzed quantitatively and qualitatively then interpreted. The results of the study were carefully discussed. These results are compared with other similar research results and theoretical studies.

## RESULTS AND DISCUSSION

The expected result of this research is teaching materials in the form of a book entitled learning science in elementary school based on local excellenses of South Sumatera for grade V elementary school. Development of teaching materials focused on basic competencies 3.4 Identify changes occurring in nature, their relation to the use of natural resources, and the effect of human activities on the balance of the surrounding environment and basic competencies 3.6 Identify animal types of food and describe food chains in ecosystems in the surrounding environment.

The research process of development of teaching materials based on local excellences of South Sumatra is described as follows:

**Stage of Analysis**

At this stage, efforts are made to obtain information related to the teaching materials of science learning used by teachers when teaching. The results of interviews with teachers obtained information that the teacher only teaches the concept or teaching materials in accordance with the existing book, the teacher book and student book. Existing teacher books and student books do not specifically create material related to the student's culture or day-to-day. So teachers need to memorize examples close to the daily life of students. Attempts to always provide examples close to the life of this student need time, good planning and adequate ability by the teacher. Therefore, elementary school teachers in the school welcomed the effort of teaching materials based on local excellences of South Sumatra. In addition, according to their learning science based on local excellences of South Sumatra is very important taught to students in order to provide information in order to be able to understand the potential and uniqueness that exist in South Sumatra.

After knowing the needs of the next field of researchers conducted a study of literature related to the development of materials based on the excellences of South Sumatra. According to Coben & Aikenhead (1997), the integration of the local environment is important to do. This is because; the first knowledge of the students about the subject matter in the form of the local environment around is a preliminary knowledge that is brought in the lesson. Second, learning materials with local potentials can enhance students' understanding of their environment. Third, can increase the love of students with the potential of the region. Fourth, to explain the concept described can use examples that are familiar with the environment of students.

Given the many benefits to be gained, the researchers concluded the need to continue the development of materials based on local excellences of South Sematera. Furthermore, researchers enter the design stage.

**Stage of Design**

At this stage is done to determine the material to be created teaching materials. From the analysis results determined basic competencies 3.4 Identify changes occurring in nature, their relation to the use of natural resources, and the influence of human activities on the balance of the surrounding environment and basic competencies 3.6 Identify the animal species of food and describe the food chain in ecosystems in the environment as material will be developed into a science learning book based on local excellences in South Sumatra. Consideration of the selection of basic competencies is because many have the potential of local excellences of South Sumatra.

At this stage of design, researchers also collect local excellences of South Sumatra that can be used as a study source of science learning in elementary school. Results of visits to the Tourism Office of South Sumatra Province obtained data as follows :

**Local Excellences of South Sumatra**

Local excellences are anything that is characteristic of regionalism that includes aspects of economic, cultural, information and communication technology, ecology, and others (Fatimah, 2016). Furthermore, according to Dwitagama, local excellences are the result of the earth, art creations, traditions, culture, service, services, natural resources, human resources or other that become the excellences of a region. Local excellences is one of the potential that exists in every region that can be used as an interesting contextual material to be taught in schools

(Subijanto, 2015). Based on that opinion, it can be concluded that local excellences are anything that is characteristic of regionalism covering economic aspect, culture of information and communication technology, ecology as well as about crops, art creations, traditions, culture, service, natural resources, human beings who can be used as contextual teaching materials that are interesting to be taught in schools or that can be utilized in a certain activities concerned with the area. The local excellences of South Sumatra shown in Table 1.

Table 1. The local excellences of South Sumatra

| No | Kabupaten/Kota | Local Excellences | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | Alam | Budaya | Buatan | Sejarah | Kuliner | Wisata Religi | Agro Wisata |
| 1 | Palembang city | 5 | 7 | 12 | 39 | 1 | 0 | 1 |
| 2 | Ogan Ilir regency | 17 | 2 | 20 | 0 | 0 | 4 | 3 |
| 3 | Ogan Komering Ilir regency | 18 | 16 | 4 | 2 | 0 | 2 | 0 |
| 4 | Muara Enim regency | 15 | 0 | 0 | 0 | 0 | 0 | 1 |
| 5 | Ogan Komering Ulu regency | 48 | 0 | 4 | 0 | 0 | 0 | 3 |
| 6 | OKU Selatan regency | 4 | 1 | 0 | 0 | 0 | 0 | 0 |
| 7 | OKU Timur regency | 13 | 8 | 0 | 0 | 0 | 0 | 2 |
| 8 | Prabumulih city | 2 | 1 | 0 | 0 | 0 | 0 | 0 |
| 9 | Empat Lawang regency | 38 | 3 | 1 | 4 | 0 | 11 | 1 |
| 10 | Musi Banyuasin regency | 8 | 4 | 4 | 0 | 0 | 0 | 1 |
| 11 | Banyuasin regency | 11 | 2 | 1 | 1 | 0 | 0 | 1 |
| 12 | Musi Rawas regency | 11 | 0 | 10 | 0 | 0 | 0 | 0 |
| 13 | Lahat regency | 61 | 0 | 4 | 7 | 0 | 0 | 0 |
| 14 | Pagar Alam city | 33 | 48 | 1 | 0 | 0 | 0 | 0 |
| 15 | Lubuk Linggau city | 2 | 1 | 1 | 2 | 0 | 0 | 0 |
| 16 | Muratara regency | 5 | 1 | 1 | 5 | 0 | 0 | 0 |
| 17 | Pali regency | 6 | 1 | 1 | 1 | 0 | 0 | 0 |
| | Total | 297 | 95 | 64 | 61 | 1 | 17 | 13 |

(Source: Departement of Tourism and Culture, 2016)

Various natural potentials that exist in South Sumatra can be used as a potential source of science learning in Primary School. In this study, local excellences are limited to the city of Palembang.

According to the Department of Tourism and Culture (2016), local excellences of Palembang city from the natural aspect that consists of the Musi river, the tourism forest of Punti Kayu, Kemaro Island, Kambang Iwak Besak and Kerto Island. From the artificial aspect consisting of the Carving Center of 19 Ilir, the Woven Handicraft Songket Center of 32 Ilir, OPI Lake, Jakabaring Sport City, OPI Water Fun, Kuto Besak Fortress Plaza, Amanzi Water Park, Palembang Bird Park, Ceng Ho Mosque, Taman Nusa Indah, Al-Qur'an Al-Akbar, Fantasy Island. Viewed from the historical aspect of Palembang city has a lot of history that is Ampera Bridge, Great Mosque, Mayor's Office, Monpera Monument, Kuto Besak Fortress, Siguntang Fort, Balaputra Dewa Museum, Textile Museum, Tomb of Kentik Gravel Grave, Lawang Kidul Mosque, Tengkurep Crater Tomb, Boom Baru, Tomb of Ki Gede Ing Suro, The Archaeological Park of Sriwijaya Kingdom, Kapitan Village, Pertamina Plaju and Gerong River, Silk Air Monument, Sabokingking Tomb, Museum of Sultan Mahmud Badarudin II, Ice Assegaf Factory, Mud River Mosque, Ki Merogan Mosque, Mosque Syeh M. Azhari Thousand Island, Al Mahmudiyah/Saro Mosque, 10 Ulu Temple, Kelenteng Pulang Kemaro, Tomb of Cinde Welang, Makam Bagus Kuning, Kebon Gede Cemetery, Sriwijaya Fertilizer Area, Firma Village, Potato Tuna Area Goa Japan Ario Kemuning, Goa Japan Jalan Joko, Kawasan Sekanak, Kuto Besak Theater, Kertapati Station, Tomb of Ariodila, and AK. Gani Museum. In this study choose from nature aspect that is Musi River, from artificial aspect will choose the Woven Handicraft Songket Center of 32 Ilir as well as from historical aspect will choose Pupuk Sriwijaya Area. Aspects that have been selected that is used as a source of science learning in class V.

**Development Stage**

At this stage, the researchers make the product by making the results of the analysis of the achievement of basic competence of natural resources and local excellences of South Sumatra. Furthermore, the decomposition of teaching materials by making the formulation of learning aims linked to the results of the analysis.

From the analysis results obtained framework for teaching materials that will be developed into a book. The framework contains basic competencies, learning indicators, learning objectives, appropriate local excellence for basic competencies and learning indicators and lastly objective learning in accordance with basic competencies and already includes appropriate local

excellences. At this stage, the textbook is produced in the form of prototype 1. Teaching materials that have been so validated by experts from material aspects, constructs and language. Here are the product validation results assessed by two experts as shown on Table 2.

Table 2 Expert Validation results on teaching materials based on local superiority of South Sumatra

| No. | Validation | Validation value (%) | Category |
|---|---|---|---|
| 1 | *Content* | 83 | Valid |
| 2 | Construct | 80 | Valid |
| 3 | Language | 70 | Quite valid |
| 4 | Media | 86 | Valid |
| | Average | 81.25 | |
| | Category | Valid | |

After the validation from the experts has been done, so the researchers done revision according to the suggestions of the validator. The input of the validator related to the language of teaching materials is still found that has not been in accordance with the enhanced spelling (EYD) and the use of language must be designed well for elementary school age children. In addition, it is suggested to bring more contents of local excellences of South Sumtera packed in an interesting story and with a more varied image. The validation results from the experts have been improved by the researchers then go into the implementation phase.

**Stage of Implementation (Product Trial)**

At this stage, the researchers try out textbooks that have been made in the science learning in elementary school from one to one stage to field test.

**Stage of Evaluation**

At this stage, evaluation is conducted to test the validity, practicality and effectiveness of the prototype. The evaluation is done by following Tessmer's formative evaluation procedure, self evaluation, expert review, one-to-one evaluation, small group evaluation, and field test evaluation.

a. Self Evaluation

At this stage, the researchers evaluate their own developed teaching materials, before entering the validation stage by experts and product trials. Here the researcher asks advice from colleagues to improve product design. This evaluation is done when researchers design and develop prototype.

b. Expert Review

Validation is conducted by the expert covering material aspects, constructs, language and media. Material validation is done to assess the material presented in the resource.

Constructed validation is carried out to assess the quality of teaching materials used in the development of the product. Language validation related to language usage in teaching materials. Media validation is performed to assess the design of the resource. This evaluation is conducted during implementation.

c. One-to-one Evaluation

The product was tested on three elementary students. At this stage, selected students who have different abilities are high, medium and low. Researchers teach by using teaching materials that have been prepared. At the end of the activity, questionnaires are distributed to students to know their responses to the prototype that has been developed while also measuring the practicality of the teaching materials in the learning process. Student comments at the one-to-one evaluation stage are used to make revisions to produce prototype II as shown on Table 3.

Table 3 Students' Response to Teaching Materials Based on Local Excellences of South Sumatra in the One-to-One Evaluation Stage

| No. | Students | Statement | | | | | | | | | | Total | % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | |
| 1 | A | 4 | 3 | 4 | 3 | 3 | 4 | 3 | 4 | 4 | 3 | 35 | 87.5 |
| 2 | B | 3 | 4 | 3 | 4 | 3 | 3 | 4 | 2 | 3 | 3 | 32 | 80 |
| 3 | C | 3 | 4 | 3 | 3 | 4 | 3 | 4 | 3 | 3 | 4 | 34 | 85 |
| | | | | | | Total | | | | | | 101 | 252.5 |
| | | | | | | Average | | | | | | 33.67 | 84.17 |

Based on Table 3, students' responses were 84.17%. This result showed that this teaching material is practical for use in science lesson at elementary school. the observation results of student activities at one-to-one evaluation can be seen on Table 4.

Table 4 The Observation Results of Student Activities at One-to-One Evaluation

| No | Aspects observed | Total | % |
|---|---|---|---|
| 1 | Students pay attention to teacher's explanation. | 3 | 100 |
| 2 | Students are not busy with activities outside the learning process. | 2 | 66.67 |
| 3 | Students ask questions related to teaching materials. | 2 | 66.67 |
| 4 | Students respond to questions asked by the teacher. | 2 | 66.67 |
| 5 | Students interact with other students during the learning process. | 2 | 66.67 |
| 6 | Students read books. | 3 | 100 |
| | Total | 14 | 466.67 |
| | Average | | 77.78 |

Based on table 4 the experiments conducted revisions related to teaching materials. The revisions include aspects of writing color composition, use of font type and size and color composition of teaching materials. The revision after one to one evaluation is called prototype II.

d. Small Group Evaluation

Prototype II was piloted in small groups aiming to see the deficiencies that were later to be improved before entering the field trial stage. Prototype II was tested against six students with different abilities namely high ability, medium and low. At the end of the activity, a questionnaire was given to the students to measure the practicality of the prototype. Student comments on the small group evaluation stage are used to make revisions to produce prototype III. The questionnaire results in the small group evaluation stage, students' responses to teaching materials based on local excellences in South Sumatra showed on Table 5.

Table 5 Students' Responses to Teaching Materials based on Local Excellence in South Sumatera at the Small Group Evaluation stage

| No. | Students | Statement | | | | | | | | | | Total | % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | |
| 1 | A | 3 | 3 | 4 | 3 | 3 | 3 | 4 | 4 | 3 | 4 | 34 | 85 |
| 2 | B | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 40 | 100 |
| 3 | C | 3 | 3 | 4 | 4 | 2 | 4 | 3 | 3 | 3 | 4 | 33 | 82.5 |
| 4 | D | 3 | 3 | 3 | 4 | 4 | 3 | 3 | 3 | 3 | 4 | 33 | 82.5 |
| 5 | E | 3 | 4 | 3 | 3 | 3 | 3 | 4 | 3 | 3 | 3 | 32 | 80 |
| 6 | F | 4 | 3 | 3 | 4 | 3 | 3 | 4 | 4 | 4 | 4 | 36 | 90 |
| | | | | | Total | | | | | | | 208 | 520 |
| | | | | | Average | | | | | | | 34.67 | 86.67 |

Based on Table 5 obtained responses of 86.67. This indicates that the responses of students are categorized very good. At this stage also conducted observation of learning activities using materials based on local excellences of South Sumatra as shown on Table 6.

Based on Table 6, it is known that students are very active in learning process (83,33%). From the results of small group evaluation experiments conducted revisions related to teaching materials. The result of revision after small group evaluation is called prototype III.

**Field Test Evaluation**

Field trials were conducted on prototype III which was the result of revision after small group evaluation stage. In the field evaluation phase, learning is done by using teaching materials in class. At the end of the activity, a test of learning outcomes was conducted to measure the effectiveness

of teaching materials. Prototype III was revised based on the results of the field test to produce a final prototype as the final product that is ready to be used in the science learning in elementary school on a regular basis. The result of student activity observation on field test evaluation is presented in the Table 7.

Table 6. The Observation Results of Student Activity at Small Group Evaluation Stage

| No | Aspects observed | Total | % |
|---|---|---|---|
| 1 | Students pay attention to teacher's explanation. | 8 | 100 |
| 2 | Students are not busy with activities outside the learning process. | 5 | 62.5 |
| 3 | Students ask questions related to teaching materials. | 7 | 87.5 |
| 4 | Students respond to questions asked by the teacher. | 7 | 87.5 |
| 5 | Students interact with other students during the learning process. | 6 | 75 |
| 6 | Students read books. | 7 | 87.5 |
| | Total | 40 | 500 |
| | Average | | 83.33 |

Table 7. The Observation Result of Student Activity at Field Test Evaluation Stage

| No | Aspects observed | Total | % |
|---|---|---|---|
| 1 | Students pay attention to teacher's explanation. | 36 | 97.30 |
| 2 | Students are not busy with activities outside the learning process. | 35 | 94.59 |
| 3 | Students ask questions related to teaching materials. | 10 | 27.03 |
| 4 | Students respond to questions asked by the teacher. | 25 | 67.57 |
| 5 | Students interact with other students during the learning process. | 35 | 94.59 |
| 6 | Students read books. | 37 | 100 |
| | Total | 178 | 481.08 |
| | Average | | 80.18 |

Based on Table 7 the observation results obtained by 80.18%, so it can be concluded that the activeness of students is in the active category.

In this stage, the researchers also conducted before the pretest of learning begins, intended to measure students' early ability on ecosystem material. Next postest is done at the end of learning.

The results of student pretest and postes can be seen in Figure 2.

Figure 2 showed the average pretest and posttest values of class V.B. Based on the picture, it is known that there is an increase in the average value. The average value of class V.B before the use of science learning materials based on local excellences of South Sumatra is only 55.81, while the average value after the use of teaching materials learning science based on local excellences of South Sumatra has increased to 81.76. The average increase in pretest and posttest results can be seen from the average gain of 25.95. This means the use of teaching materials science learning based on local excellences of South Sumatra can improve student learning outcomes in basic competencies 3.6.

The results of the questionnaire recapitulation at this stage can be seen in the table 8. The students response questionnaire is aimed to know the student's response to teaching materials learning science based on local excellences of South Sumatra. Based on Table 8, it is known that most of the students give very agreeable response are 56,76%, and 41,62% students give response agree. This means that the teaching materials of science learning based on local excellences of South Sumatra get a positive response from students.

Table 8. Student's Questionnaire on Field Test Evaluation Stage

| No. | Statement | Skor (%) | | | |
|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 |
| 1. | I can easily use this book. | 0 | 0 | 51.35 | 48.65 |
| 2. | The teaching materials presented in this book are clear and systematic. | 0 | 0 | 35.14 | 64.86 |
| 3. | The material presented in this book is very helpful in remembering the material. | 0 | 2.70 | 37.84 | 59.46 |
| 4. | This book has problem exercises and test questions that can clarify my understanding. | 0 | 0 | 37.84 | 62.16 |
| 5. | Given the examples around me it makes it easy to understand the material. | 0 | 5.41 | 35.14 | 59.46 |
| 6. | This local advantage-based teaching material is easy to use and simple to use | 0 | 2.70 | 70.27 | 27.03 |
| 7. | After I use this resource, I am motivated to study hard | 0 | 0 | 32.43 | 67.57 |
| 8. | The use of this resource is very easy | 0 | 2.70 | 51.35 | 45.95 |
| 9. | By reading this book I became familiar with local excellence in South Sumatra | 0 | 0 | 45.95 | 54.05 |
| 10. | By reading this book I love the advantages that exist in South Sumatra | 0 | 2.70 | 18.92 | 78.38 |
| | Average | 0 | 3.24 | 41.62 | 56.76 |

Note :
Score 1: Strongly disagree, Score 2: Disagree, Score 3: Agree, Score 4: Strongly Agree

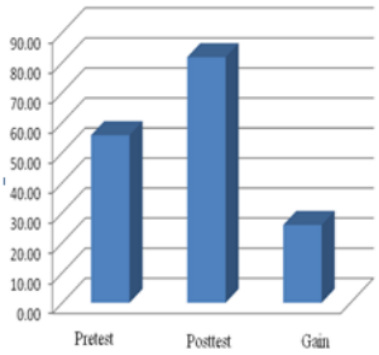


Figure 1. Pretest and Postes Results at the Field Test Evaluation stage

## CONCLUSION

Based on the results of the research, it can be concluded that the teaching materials based on local excellences of South Sumatra declared valid by all validators. Once tested in one to one, small group evaluation, field test evaluation of this instructional material is considered practical. So it can be concluded that the teaching materials of science learning in elementary school based on local excellences of South Sumatera is feasible use in the learning process.

## SUGGESTION

The suggestions for further research can develop teaching materials with other basic competencies and other subjects. In addition, it can also apply information of local excellences in South Sumatra in learning by integrating model, media or assessment instruments.

## ACKNOWLEDGEMENT

The researchers say thanks to all those who have helped in this research. Especially to Institute of Research and Development of University of Sriwijaya which has funded this research.

## REFERENCES

Ahmadi, IK, Amri, S & Elisah, T 2012, *Mengembangkan Pendidikan Berbasis Keunggulan Lokal dalam KTSP*, Prestasi Pustaka, Jakarta.

Coben, WW & Aikenhead G 1997, *Culture Aspect of Learning Science* (No. 13). viewed 30 May 2018,<http://scholarworks.wmich.edu/science_slcsp/13>

Duncan, M 2014, 'How the cultural contexts of urban teaching affect novice science educators: Implications for school leaders', *International Journal of Educational Leadership Preparation*, vol. 9, no. 1, pp.1-17

Departement of Tourism and Culture. (2016). Statistik Pariwisata 2016 Provinsi Sumatera Selatan, Departement of Tourism and Culture South Sumatera Province, Palembang.

Fatimah 2016, 'Pengembangan pendidikan karakter dan keunggulan lokal dalam kurikulum kejuruan di SMK Negeri Kabupaten Tapin', *Jurnal Pendidikan Kewarganegaraan*, vol. 6, no. 11, pp. 882-9

Laksana, DNL, Putu, AWK & Irama, N 2016, 'Pengembangan bahan ajar tematik SD kelas IV berbasis kearifan lokal masyarakat Ngada', *Jurnal Ilmiah Pendidikan Citra Bakti*, vol. 3, no. 1, pp. 1-10

Laksana, DNL & Wawe, F 2015, 'Penggunaan Media Berbasis Budaya Lokal dalam Pembelajaran IPA untuk Meningkatkan Aktivitas dan Pemahaman Konsep IPA Siswa Sekolah Dasar. *Jurnal Ilmiah Pendidikan Citra Bakti,* vol. 2, no. 1, pp. 27-37.

Morrison, G. R., S.M. Ross., H. Kalman & J.E. Kemp. 2012. *Designing Effective Instruction*. 7th edition. John Wiley & Sons, INC. New York.

Provincial Government of South Sumatera 2014, Rencana Pembangunan Jangka Menengah Daerah (RPJMD) Provinsi Sumatera Selatan Tahun 2013-2018. Regional Planning Board of South Sumatra Province. Palembang

Santoso. 2010. Konsep Diri melalui Pendidikan Berbasis Keunggulan Lokal Sebagai Model Pendidikan Berkarakter dan Berbudaya Bangsa Di Era Global. *Proceedings of The 4th International Conference on Teacher Education; Join Conference*. 8-10 November 2010. UPI & UPSI, Bandung, Indonesia.

South Sumatra Province 2015, Seri Analis Pembangunan Wilayah Provinsi Sumatera Selatan 2015, South Sumatra Province, Palembang

Subijanto 2015, 'Kebijakan Program Pendidikan Berbasis Keunggulan Lokal di Sekolah Menengah Atas Negeri 2 Pekalongan', *Jurnal Pendidikan dan Kebudayaan*, vol. 21, no. 2, pp. 115-35

Suratmi 2016, *Pelatihan Penyusunan LKPD bagi Guru IPA Kabupaten Ogan Ilir Indralaya*. Report of Community Service of University of Sriwijaya, Palembang

Susanto, A 2013, *Teori Belajar dan Pembelajaran di Sekolah Dasar*, Prenada Media Group, Jakarta.

Tessmer, M 2005, *Planning and Conducting Formative Evaluations,* Routledge, London.

# Development of Teaching Materials Based on Local Excellences of South Sumatera for Science Learning in Elementary School

ORIGINALITY REPORT

| 14% | 10% | 7% | 3% |
|---|---|---|---|
| SIMILARITY INDEX | INTERNET SOURCES | PUBLICATIONS | STUDENT PAPERS |

MATCH ALL SOURCES (ONLY SELECTED SOURCE PRINTED)

1%

★ Armiati, Yerizon, Resi Niscaya. "Flipped classroom based mathematics learning equipment for students in grade X SMA", Journal of Physics: Conference Series, 2019

Publication

| | | | |
|---|---|---|---|
| Exclude quotes | On | Exclude matches | < 1 words |
| Exclude bibliography | On | | |