Developing Context-Based Reading Materials

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Abstract--This study aimed to explain the process of developing teaching materials based on Contextual Teaching and Learning (CTL). As the basis of development, this study used 7 types of texts that should be learned in class VII SMP items, namely descriptive texts, fantasy texts, procedural texts, report texts, poetical texts, fable texts, and letters texts. The development models of Plomp is used to analyze the needs (preliminary phase), make the design (prototyping phase), and conduct field test (evaluation phase). The results show that the contextual reading of developed material meets the criteria of validity, practicality, and effectiveness. It is expected that these materials can improve reading interest and skills of the students.

Keywords-- reading skill, reading materials, contextual teaching and learning model

I. INTRODUCTION

The ability to read is the essence of self-education and lifelong learning because reading has a role in self-development (Tella & Akande, 2007). Reading has a positive impact on cognitive development (Moore and Cahill, 2016; Basuki, 2011); the foundation for building other academic skills (Hassen, 2016). Therefore, the ability to read should be improved in an effort to develop an educated society (Wahyuni, 2010).

Reading skills among students should be improved through various channels, either formal or non-formal education such as in reading garden (Moore & Cahill, 2016). On formal education, learning to read needs to be implemented more seriously, both in terms of speed and understanding. Not just being able to answer factual questions in text, but also connect with the experience, even able to respond the text content (Pineda, 2014). Through reading garden, reading skills are enhanced for aspects of passion, interest, and fun.

Through the formal education path, the government has implemented a national curriculum since 2013, called K-13. To support implementation, the Curriculum and Book Center has established a number of textbooks for all subjects. In addition, the private sector also publishes supporting books as an additional government book. However, the books are still considered to be much deficient in terms of readability (Fadilah & Mintowati, 2015); incompleteness of the material description and learning approach (Asri, 2017); improper language usage (Purnanto & Mastudi, 2016); and inadequate illustrations (Muslich, 2011).

One solution offered to help overcome these shortcomings is the development of teaching materials. The developed teaching material is focused on reading material for seventh grade junior high school students. Teaching materials are developed as models so that teachers can make them as examples or guides to develop their own reading material relevant to student characteristics. In addition, the teaching materials developed are tailored to the CTL approach so that learning is more student-centered, cooperative learning, self-learning, relating to daily life, not just memorization, and authentic assessment (Utomo, 2016; Sugiyono, 2010; Khotimah, & Masduki, 2015; Khaefiatinnisa, 2015; Plomp, 1997).

Based on the stated issues and models of teaching materials offered, this study aims to explain the process of developing teaching materials to help junior high school students learn to read. Teaching materials (product research) were developed based on a contextual approach intended to motivate students and teachers in the learning process.

II. METHOD

The development research (Gall, Borg, and Gall, 1996) undertaken is following the Plomp (1997) model with three phases: preliminary research, prototyping phase and assessment phase. In preliminary research, needs, curriculum, students, and concepts of reading learning in junior high school are identified and analyzed. Based on the analysis of the needs, reading material is developed for the seven texts that are set. The teaching materials were developed based on CTL. The teaching materials are validated to students/teachers, and experts (prototyping phase). Once declared valid, then tested in class to know the level of its practicality and effectiveness (asessment phase).

Several instruments (questionnaires, interviews guide, and tests) were prepared to analyze field conditions, to determine suitable learning materials, and learning outcomes. The subjects of the trial were the students of grade VII SMP Padang, West Sumatra, Indonesia with three schools of SMPN 12 Padang, SMPN 8 Padang, and SMPN 30 Padang, with 220 students. Data were descriptively analyzed with product feasibility level above 75%.

III. FINDING AND DISCUSSION

a. Preliminary Research

Through interviews, many things are known about the circumstances of learning to read in junior Padang as in table 1.

Table 1. Requirements Analysis

| No.	Statement	School-1	School-2	School-3
1.	Students' skills in reading comprehension.	Good	Enough	Enough
2.	Time to learn to read.	Not enough	Not enough	Not enough
3.	Constraints in learning to read.	Limited reading sources	less time	Low student interest in reading
4.	Learners read the difficult aspects for students.	Identifying information in the text	Identifying information in the text	Understanding the text content
5.	Connecting the material with real life.	Yes	Yes	Yes
6.	Students were asked to dig up information on learning.	Yes	No	No
7.	Guidance for students discover the concept of reading independently.	No	No	No
8.	Referrals for students to ask in learning.	Yes	Yes	No
9.	Cooperative learning.	Yes	Yes	Yes
10.	Example text is provided for comprehension.	Yes, taken from the Internet and revised	Yes, taken from the Internet and revised	No, only book sources
11.	Reflection after implementing learning.	No	No	No
12.	Learning resources used in learning.	Textbooks of government (Ministry of Education and Culture) and sources on the Internet	Textbooks from Ministry of Education and Culture and sources on the Internet	Textbooks from Ministry of Education and Culture and sources on the Internet
13.	Text books provided by the government are adequate	Already, but still need additional learning resources	Already, but still need additional resources	Already, but still need additional resources
14.	Advantages and disadvantages of learning resources that have been used.	Examples much text is displayed, but not close to the student environment.	Having a diverse tests, but the matter is less detailed.	Having a diverse tests, but the sample text is not close to the student context

Based on the needs analysis above, it is concluded that the learning process cannot be implemented properly because of the limitations of teaching materials both in terms of variation and in terms of contents. Especially for junior high scholl students, there are a number of texts to be learned. In reading learning, students should be able to understand, identify, and analyze texts. Thus, required reading material is what helps students improve their ability to understand, identify, and analyze texts. The expected competencies can be seen in table 2.

Table 2. Analysis of Instructional Materials Concept and Relevance To Curriculum

No.	Text Learned	Comprehension	Skills
1.	Description text	Identifying, analyzing	Explaining, presenting data
2.	Story fantasy text	Identifying, analyzing	Retelling, present ideas
3.	Procedure text	Identifying, analyzing	Summing up, the present data
4.	Reports text	Identifying, analyzing	Summing up, summarizes
5.	Folk poetry	Identifying, analyzing	Summing up, examine
6.	Fables text	Identifying, analyzing	Retelling, acting
7.	Letter	Identifying, analyzing	Summing up, write

b. Prototyping Phase

Based on the needs analysis and curriculum analysis, then teaching materials relevant to the needs of learning to read is designed so learning activity can be more interesting, exciting, and motivating for the students. In general, the pattern of teaching materials developed is as shown in Figure 1.
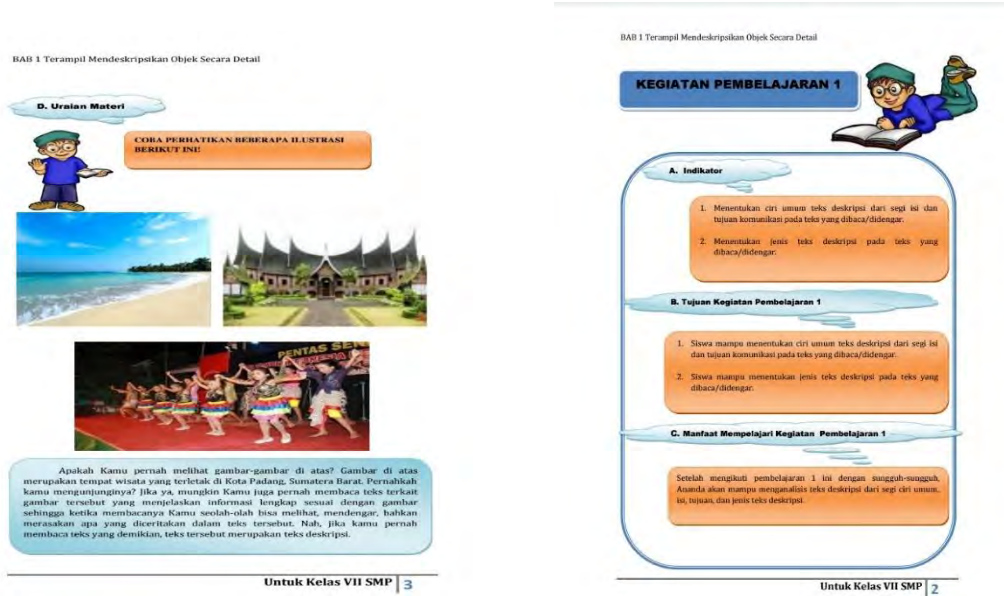
Picture 1. Design Patterns Reading Materials-Based Context

The process of making design up to validation stage is done as follows. Table 3 shows the self-evaluation of developed material reaches 88.20 (very valid). This is possible because the design has been done carefully and considered the needs analysis and student analysis.

Table 3 Self-Evaluation of Reading Materials

No.	Rated Aspect	Indicators Rating	Validity (%)	Category
1.	Feasibility contents of teaching materials	The accuracy contents of teaching materials to the curriculum	88.89	Very valid
		Concepts outlined in teaching materials		
		The contents of teaching materials		
2.	Language in teaching materials	Sentence	87.50	Very valid
		The idea and style of presentation		
Results Validation of Self-Evaluation In Overall			**88.20**	**Very valid**

After self-evaluation, teaching materials are validated to the expert. The aspects of validation are content, language, presentation, and graphics. Validation results are presented in Table 4.

Table 4. Validation Results of Teaching Material by Expert

No.	Rated Aspect	Indicators Rating	Validity (%)	Category
1.	Feasibility contents of teaching materials	The accuracy contents of teaching materials to the curriculum	87.50	Very valid
		Material or concept		
		The contents of teaching materials		
2.	Language in teaching materials	Sentence	91.67	Very valid
		The idea and style of presentation		
3.	Presentation materials	Core competencies and basic competencies, indicators, and the purpose of learning	97,50	Very valid
		Presentation material		
		Presentations book		
4.	Graphics in teaching materials	Display materials	88.89	Very valid
		The use of images, colors, fonts, etc.		
Validation of Teaching Material by Expert In Overall			**92.00**	**Very valid**

Expert validation results on reading material reach a very valid level, in which content, language, learning and graphics meet the standard of good teaching materials. Similarly, the results of validation of teaching materials by teachers of Indonesian subjects as shown in Table 5. In general, teachers stated that the material is very good (very valid).

Table 5. Validation Results of Teaching Material by Teacher

No.,	Rated Aspect	Indicators Rating	Validity (%)	Category
1.	Feasibility contents of teaching materials	Material or concept The contents of teaching materials	77.78	Valid
2.	Language in teaching materials	Sentence The idea and style of presentation	77.78	Valid
3.	Presentation materials	Presentation material Presentation book	100.00	Very valid
4.	Graphics in teaching materials	Display materials The use of pictures, colors, and fonts.	88.89	Very valid
Total Value of Teacher Response			344.45	**Very valid**
Response Teacher In Overall			**86.11**	

Prior to use in the classroom, students were also asked to comment on the reading materials developed. The validation of the students is done through a questionnaire of 220 students. The results can be seen in Table 6.

Table 6. Results of Student Response

No.	Statement	Answer Students		Validity Value (%)	Category
		Yes	No		
1.	Understand the material / concepts presented in teaching materials.	203	17	92.27	Very valid
2.	The materials encourage curiosity.	213	7	96.82	Very valid
3.	Teaching materials encourage learning effectively.	208	12	94.54	Very valid
4.	Sentences that are simple, clear, and easy to understand.	212	8	96.36	Very valid
5.	The idea of good order.	215	5	97.73	Very valid
6.	The delivery style of teaching materials communicative.	203	17	92.27	Very valid
7.	Presentation material or section title is short and clear.	215	5	97.73	Very valid
8.	Presentation materials and establish motivating to ask the public to learn.	205	15	93.18	Very valid
9.	Teaching materials come with instructions for use.	217	3	98.64	Very valid
10.	The order of presentation of teaching materials prepared properly.	217	3	98.64	Very valid
11.	Views increase interest and motivation to learn.	217	3	98.64	Very valid
12	Illustration is interesting and appropriate to the learning material.	208	12	94.54	Very valid
13.	Variations in the use of color increase the motivation to learn.	216	4	98.18	Very valid
14.	Conformity type and size of letters with the level of development of students.	216	4	98.18	Very valid
Total Value of Students Response				1347.73	**Very valid**
Values of Student Response In Overall				**96.27**	

Overall prototyping stage is successful. This is evident from the responses of students, teachers, and experts. Almost all respondents stated that the teaching materials developed fit for use because it fits the context of the students, the language easily understood, and learning procedures easier for students to understand, answer questions, and to apply it in real life. In addition, illustrations and font size suit the students.

c. Assessment Phase

After the teaching materials declared valid by the respondents, then trials were conducted in three schools (SMPN 8 Padang, Padang SMPN 12, and SMPN 31 Padang). In the testing phase, the level of practicality and effectiveness of reading materials are assessed. Practical values are collected through questionnaires and interviews, and effectiveness values are collected through knowledge tests. The results of practicality can be seen in table 7 (teachers), 8 (students), 9 (learning activities), the effectiveness can be seen in Table 10 (student attitudes) and 11 (student learning outcomes).

Table 7 Results The practicalities by Teachers

No.	Rated Aspect	Indicators Rating	Practicalities (%)	Category
1.	Presentation	Accuracy of KI, KD, indicators and learning objectives	98.61	Very practical
		Presentation material		
2.	Ease of use	Ease of use materials		
		The contents of reading materials	98.11	Very practical
		Benefits application of reading materials		
3.	Legibility	Readability of reading materials	100.00	Very practical
4.	Time used	Practicality application of read ing materials	88.89	Very practical
Total Value Practicalities by Teachers			**385.61**	**Very practical**
Practicalities Value by Teacher In Overall			**96.40**	

Next, practicalities of students. The practicalities value obtained through interviews are conducted with 220 students. Results of the practicalities of such students can be seen in the following table.

Table 8. Practicalities Results of Reading Materials by Students

No.	Statement	Answer Students		Practicalities Value (%)	Category
		Yes	No		
1.	Interest in teaching materials.	214	6	97.0	Very practical
2.	Teaching materials can enhance the spirit of learning.	211	9	96.0	Very practical
3.	The benefits of teaching materials in everyday life.	211	9	95.9	Very practical
4.	The linkage concept or learning materials to read.	215	5	97.7	Very practical
5.	Teaching materials are easy to read, understand, and remember.	204	16	92.7	Very practical
6.	Time spent is not unnecessarily long because it is easy to understand.	204	16	92.7	Very practical
7.	Helping self-learning without any explanation from the teacher.	203	17	92.3	Very practical
Total Value Practicalities by Students				**664.0**	**Very practical**
Practicalities Value by Students In Overall				**95.0**	

Tables 7, 8, and 9 show that, the teaching materials are easy to use, attractive; it can also increase student interest. In general, teachers and students stated that these materials practical. More specifically, through interviews, the students stated that the teaching materials developed are exciting, enhance the spirit of learning, related to everyday life, easy to understand and help independent learning.

Table 9. Results of Student Learning Activities

No.	Statement	frequency of Activities	Percentage Activity	Category
1.	Studying the teaching materials in accordance with the instructions provided.	192	87.27	Very active
2.	Digging for information or comprehension based learning topics.	192	87.27	Very active
3.	Finding itself the concept readings based learning topics.	181	82.27	Very active
4.	Obtaining information through activity based learning topics asked.	187	85.00	Very active
5.	Cooperate and a variety of learning experiences with the group.	192	87.27	Very active
6.	Carried out an inquiry to identify the examples provided.	196	89.09	Very active
7.	Presenting instructional feedback	174	79.09	Active
8.	Working on performance tests appropriate given problem	220	100.00	Very active
Total Value Student Activity			**697.26**	**Very active**
Value Student Activity In Overall			**87.16**	

Next is the effectiveness of teaching materials. This phase is done through attitude assessment and student learning outcomes. The value of student attitudes is obtained through observation of the value of attitude sheet. The value of student attitudes will be based on classroom research. The experiments were conducted in seven classes. Each class studied the text. Student attitudes can be seen in table 10.

Table 10. Results of Student Attitudes

No.	School	Text that Tested	Number of Students Trial	Percentage Rate Attitude			Value	Predicate
				A	B	C		
1.	SMP N 8 Padang	Story Fantasy Text	32	91.67	88.54	89.58	89.93	A
		Procedure Text	32	91.67	90.63	90.63	90.97	A
		Fables Text	30	91.11	90.00	90.11	90.37	A
2.	SMP N 12 Padang	Description Text	31	94.62	95.69	95.69	95.34	A
		Letter	31	89.25	88.17	89.25	88.89	A
3.	SMP N 31 Padang	Reports Text	32	97.92	84.38	92.71	91.67	A
		Folk Poetry	32	94.79	90.63	92.71	92.71	A
Total Value Attitude Students				651.03	628.04	640.68	693.88	**A**
Value Attitude Students In Overall				93,00	89.72	91.53	91.41	

Next, student learning outcomes. Student learning outcomes obtained through the ability to read text. The test is tested in the form of a multiple-choice objective test. The value of students' reading ability test can be seen in Table 11 below.

Table 11. Results Of Student Learning Outcomes Scores

No.	School	The Text To Be Tested	Number of Students Trial	Value	Predicate
1.	SMP N 8 Padang	Story Fantasy Text	32	83.88	B
		Procedure Text	32	84.31	B
		Fables Text	30	75.00	B
2.	SMP N 12 Padang	Description Text	31	78.28	B
		Letter	31	80.65	B
3.	SMP N 31 Padang	Reports Text	32	80.23	B
		Folk Poetry	32	80.06	B
Students Reading Ability Test Scores				562.41	**B**
Reading Ability Values In Overall				**80.34**	

Discussion

Analysis of preliminary research (students, curriculum, and concepts) showed that it is important to develop reading materials on learning Indonesian literature, especially for reading skills. Indonesian learning in Curriculum 2013 (Core Competence and Basic Competence) focus on language and text as the basis (Regulation of the Minister of Education and Culture No. 24/2016).

In the preliminary research, it was found that the instructional materials used by students in the school have not been able to support the learning process. This caused the material factors become unexhaustive and detailed, learning materials do not attract students to read, and the presentation of material in the teaching materials are not connected to real life contexts of students, so that learning becomes less meaningful. Based on this, it is necessary to develop a model of instructional materials that can serve as an example for teachers to develop teaching materials that suit the needs of students.

Next, based on the prototyping phase, is the development of reading materials. Model reading materials developed by considering four issues, namely the aspect of content, presentation, linguistic, and graphics. First, on the content, reading materials developed consists of seven text is descriptive texts, fantasy story texts, procedure texts, report texts, folk poetry, fable texts, and letters. Second, reading materials are developed based on CTL. The structure of reading material consists of an introduction, materials, and evaluation. Third, the language used according to the students who use the materials to be easily understood. Fourth, reading materials furnished with illustrations and some other suitable supporting elements in order to be interesting reading materials.

Reading materials have been designed, it was further validated, in order to obtain a valid material (content, presentation, linguistic, and graphics). This is in line with Emzir (2010, p. 273), who argues that the validation is the process of product design assessment done by giving a rating based on rational thinking. Validated reading materials must meet the eligibility criteria in terms of the validity of the content, language, presentation, and graphics (Depdiknas, 2008, p. 28). Based self-evaluation of teaching materials developed reached very valid category with 88.20% validity. Thereafter, reading materials were validated to experts. In this study, the validation is performed by four experts according to their expertise. Based on the validity by experts, teaching materials developed very valid category with 92% of validity. Furthermore, validation reading materials by the response of teachers and students each amounting to 86.11% and 96.27%. This is in accordance with the opinion of Riduwan (2014: 15) who states that value interval of 81-100 is a very valid category. Based on these values, teaching materials can be tested at schools.

Valid teaching materials are tested to the school for practical value (presentation, ease of use, legibility, and time spent) and effectiveness (student learning activities, attitudes and learning outcomes) of teaching materials. This

activity is part of the assessment phase. Experiments in question is trying out materials that have been validated to some samples of learning objectives (Daryanto, 2013, p. 51-52). The results showed that the teaching materials developed are very practical with the practicalities by teacher and students respectively 96.4% and 95%. This is in accordance with the opinion of Riduwan (2014, p. 15) who states that the interval of 81-100 is very practical. Thus, developed teaching materials are easy to understand, easy to use, and have enough time to use. Teachers revealed that the materials used are very helpful in learning reading, because the texts are diverse, close to the students, includes a variety of evaluation tools and guidelines for the assessment of reading skills.

Lastly, this study performed testing on the effectiveness of reading materials. The effectiveness of reading materials used is determined by student learning outcomes (Kemp, 1994, p. 320). The results showed reading materials developed very effective category with 80.34 for the value of student learning outcomes, and 91.41 for the value of student attitudes.

IV. CONCLUSION AND RECOMMENDATION

Based on the discussion, it can be concluded that in general Indonesian language teachers only use materials provided by the ministry of education and culture. The teaching materials have not been able to support the learning process. Therefore, it is necessary to develop models of teaching materials that can serve as a model for teachers to develop their own teaching materials and tailored to the needs of students and can be linked to real-life contexts of students as well.

Through some phase of activities that have been carried out, this study produced a reading materials based on CTL for seventh-grade junior high school students, which consists of seven texts. Development activity in this study starts with preliminary research, then design reading materials and validated to see the validity. After teaching materials were valid, teaching materials were tested at school. The results of research trials show that teaching materials are practical and effective for learning to read for seventh-grade students Indonesian junior high schools. Based on these results, it is expected that teachers can develop their own teaching materials to be used as additional teaching materials for the main teaching to suit the needs of students and can be linked to the real-life context of students, especially for reading skills.

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