

Development of CTL-Based Reading Materials

Delsy Arma Putri, Atmazaki, Ermanto
Universitas Negeri Padang
delsyarmaputri@gmail.com

Abstract-The study aimed to describe developmont of CTL-based reading materials for junior high school students. The product of this research was a reading material of procedure text-based on CTL summarized in a booklet (textbooks) which are valid and practical. The Instructional design used R and D development model proposed by Plomp consisting of three steps: preliminary research, prototyping, and assessment phase. The results showed that CTL-based reading materials were very valid in terms of presentation, content feasibility, language accuracy, and display. Furthermore, the value of CTL-based teaching materials practicality reached very practical in terms of presentation, ease of use, readability, and the time spent in studying the reading materials. Based on the analysis and discussion, it was concluded that the developed CTL-based reading material is feasible to be used to help students improve their reading skills, especially in learning to read procedure texts. This reading material is expected to improve students' motivation, interest, and reading skill, as well as overcome the limitations of learning resources in the learning activities of reading procedure text.

Keywords-Reading Materials; Procedure Text; CTL

I. INTRODUCTION

Reading was one of the skills needed to shape literacy competencies that currently intensified by the government. Literacy defined as a person's skills (listening, speaking, reading, and writing) to communicate (USAID, 2014, p. 2). Thus, reading becomes necessary to build a literate society. The literacy movement was also intensified in schools, as one of the government's efforts to cultivate reading habits.

Reading habits were very influential on student achievement (Durgaiyah, 2016, p. 655-661). One of them, reading plays an important role to improve the competence of science and mathematics (Akbaşlı, et al., 2016, p. 108-121). Therefore, in Curriculum 2013, Indonesian subjects selected to integrate other fields of science, such as Natural Sciences (IPA) and Social Sciences (IPS). This was accordance with Rraku's opinion (2013, p. 1-4) which states reading not only improves the quality and quantity of knowledge, but the insights gained from reading can be applied in different studies or various academic subjects.

The purpose of reading were the students able to understand and respond to the content of reading correctly (Ameer, 2016, p. 2522); able to dissect the text to find its structure and characteristics, so that they understand the information and can compare the various types of texts (Nahotko, 2016, p. 732); and able to understand the sentences and structure of the text that has been read (Cagri, 2012, p. 91). However, this goal should be supported by the quality reading material.

Recognizing the reading importance for life, reading habits must be developed early (Dahlan, 2008, p. 21). However, based on current facts, the competence of Indonesian students in terms of reading relatively low. The results of Programme for International Student Assessment (PISA) initiated by the Organisation for Economic Co-operation and Development (OECD) stated that average scores obtained by Indonesian students in science, reading and math was ranked as 62nd, 64th and 63th of 70 countries evaluated (OECD, 2016). This fact supported by study Most Littered Nation In the World conducted by Connecticut State Univesity in March 2016. Indonesia was ranked as the 60th of 61 countries on reading interest (Kompas, 2016).

Various problems reading, according to Aryaningsih (2013, p. 3) caused by several factors: 1) culture which still prioritizes oral culture than reading, 2) fewer teachers create the practice of reading, 3) the influence of electronic media and social media made children prefer to play the gadget than reading a book, and 4) lack of availability of reading materials in terms of both quantity and quality. In school, it affects the students' motivation to read, reading task only done when associated with the assessment (interviews with SMP 8 Padang teacher).

In relation of reading materials that used in schools, the results of observations on textbooks indicate: (1) learn sources was only textbooks provided by Kemendikbud (there was student books and teacher books); (2) there was no additional reading books for exercise materials in the classroom or library; (3) incomplete material, mostly there was just instructions that students should do; (4) teachers never developed their own reading materials which can support the curriculum. It made students less understand the purpose of the activities undertaken, so it was not aroused curiosity and motivation of students in learning. The same stated by Khaefiatunnisa (2015, p. 80-95) and Lestari (2016, p. 107).

Based on some of the issues described above, the specific problem of reading in schools was limited sources for students and teachers. The necessary effort to made learning resources available in schools was (1) relevant to the objectives of the curriculum, there was valid in terms of presentation, appropriateness of content, language, and graphics (Depdiknas, 2008, p. 28); (2) practical use by students and teachers, in terms of presentation, ease of use,

readability, and time spent (Arikunto, 2008, p. 92). Reading materials with characteristics that were valid and practical, made the learning process take place with the draw, so the results also good.

Based on some of the issues described, the most fundamental problem in learning to read in schools was the limited source of reading materials for students and teachers. It takes effort to make a quality reading materials in school, including (1) relevant to the curriculum objectives, that was valid in terms of presentation, content feasibility, language accuracy, and display (Depdiknas, 2008:28); (2) practically used by students and teachers, in terms of presentation, ease of use, readability, and the time spent in studying the reading materials (Arikunto, 2008:92). The existence of teaching materials with valid and practical characteristics, make the learning process will be interesting, so the results also good.

In this study, developed reading materials of procedure text based on CTL for seventh-grade junior high school. The procedure text describes the steps-action or activity in sequence. The content of procedure text, made students understood the steps of an activity, such as cooked something, played something, and does an activity. In addition, students also creative by utilizing instructions or procedures for handicrafts made. Thus, the learning of procedural text was very useful for students daily life (Priyatni, 2014, p. 115; Kosasih, 2016, p. 45).

Specifically, the developed reading material was intended to support the curriculum, there was KI 3 on knowledge, KD 3.5 "to identify text procedures on how to do something and how to make (how to play a musical instrument/dance area) from various sources read and heard," and KD 3.6 "examines the structure and linguistic aspects of text procedures on how to do things and how to make (how to play musical instruments/dance areas, how to make regional culinary, make souvenirs) from various sources of reading and listening."

The development reading materials of procedure text following the contextual teaching and learning steps. As suggested by Sumardi (2000), teaching materials should develop based on specific learning approaches, thus had a definite basis and direction in learning activities at school. This approach was chosen in order to teachers can help connect the subject matter with the student's experience in real situations, so that students could see the relevance of the material learned in the classroom with the application in daily life (Berns and Erickson, 2001). Contextual learning was a learn to emphasize students' interests and experiences (Satriani et al., 2012).

Furthermore, the developed reading material should be appropriate in terms of presentation, content feasibility, language accuracy, and appearance, thereby enabling students to understand the information and ideas in the text that has been read (López and Medina, 2016). Teaching materials that developed should be assessed practically in order to use properly and support student learning activities (Plomp, 2007, p. 127). Thus, the formulation of this research problem as follows. "How does the process about developing reading materials of procedure text-based on CTL that valid (in terms of terms of presentation, content feasibility, language accuracy, and display), and practical (in terms of presentation, ease of use, readability, and the time spent in studying the reading materials) for seventh grade student at Junior High School?"

The purpose of this study was to explain the process of developed reading materials about procedure text-based on CTL that valid (in terms of terms of presentation, content feasibility, language accuracy, and display), and practical (in terms of presentation, ease of use, readability, and the time spent in studying the reading materials) for seventh grade student at Junior High School. Reading materials developed was expected to overcome the limitations of learning resources in learning procedures text. The materials expected to make learning more meaningful, useful for the progress of the activity and student learning outcomes.

II. METHODS

The Instructional design used R and D model proposed by Plomp consist of three steps: preliminary research, prototyping phase, and assessment phase. The product of this research was a reading material of procedure text-based on CTL summarized in a booklet (textbooks) that valid and practical for the seventh-grade student at Junior High School. Curriculum reference used was curriculum 2013. In 2013 curriculum, learning of reading contained on KI 3, which is understanding of knowledge (about factual, conceptual, and procedural) based on students' curiosity about science, technology, visual art, and visible phenomena. Meanwhile, KD used for learning to read procedure text is KD 3.5, and KD 3.6 which understand and examine the characteristics of procedure text.

Data analysis techniques used in this research was descriptive data analysis techniques which describe the validity and practicalities of reading materials developed. Validation related to the value about the feasibility of reading materials. The assessment carried out by filling a questionnaire validity by experts who experienced in order to know the weaknesses and advantages of the products developed (Sugiyono, 2010, p. 41). The validated aspect of reading materials was the feasibility of the presentation, content, language accuracy, and display (Depdiknas, 2008, p. 28).

Meanwhile, the practicality of reading materials relates to the convenience of teachers and students in using them. That was in line with Plomp's (2007, p. 124) opinion, a teaching material was practicable if used easily by teachers and students in learning. The practicality of reading materials could be known after the test. According to Daryanto (2013, p. 51-52), the intended test was to test the draft of validated reading materials. Practicality test of instructional material done by teacher and student after studying instructional from materials of procedure text developed. Teachers and students asked to complete a practicability questionnaire.

III. FINDING AND DISCUSSION

Based on the design of development Plomp models, teaching materials of procedure text-based on CTL develop on three stages, (1) preliminary research, (2) prototyping phase, and (3) assessment phase. The results of this research described as follows.

This stage was the first step to collect and analyze information, define the problem, and plan the next activity. This stage was done by analyzing needs, analyzing curriculum, analyzing concepts, and analyzing students. The aims to establish the necessary requirements in the development of reading materials about procedure text based on CTL.

The results of needs analysis conducted with interviews and field observations indicate that learning resources were limited so that teachers and students need other materials that could motivate and associate learning with daily life. Furthermore, the results of analyzing the curriculum show the procedure text was in KI 3 knowledge, KD 3.5 and KD 3.6 which understand and examine the characteristics of procedure text. Then, the results of analyzing the concepts indicate that the learning procedure text begins from the meaning of procedure text, the function of procedure text, information in procedure text, the general characteristics of procedure text, the type of procedure text, examining structure of procedure text, and last examining the linguistic of procedure text. Furthermore, the result of student's analysis showed the maturity level and the students' experience, both as individuals and group was 80,94% with high category, the reading habits of student was 59,84% with medium category, student reading interest level was 59,77% with medium category, psychomotor and social skill level of student was 72,66% with high category. Overall of preliminary research stage results could see in table 1 below.

Table 1
Result of Preliminary Research

No.	Steps being taken	Instrument	The results were used as a basis for making reading materials
1.	Needs analysis	The format of the interview and observation sheets	Reading materials developed should be able to motivate and associate learning with students daily life.
2.	Analysis curriculum	Curriculum analysis sheet	Reading materials developed according to the Curriculum 13, which is based on KI 3, KD 3.5 and KD. 3.6
3.	Analysis of the concept	Concept analysis sheet	The material in reading materials should be complete, starting from the meaning of procedure text, the function of procedure text, information in procedure text, the general characteristics of procedure text, the type of procedure text, examining structure of procedure text, and last examining the linguistic of procedure text.
4.	Analysis of students	Questionnaire analysis of student	Reading materials developed are tailored to the student's age, students' social and cognitive skills, with an attractive display and an easy-to-understand language.

Based on the preliminary research, reading materials of procedures text developed in accordance with the results of needs analysis, curriculum analysis results, concept analysis results, and student analysis results. The reading materials designed using CTL approach. This was in accordance with opinion Sumardi (2000), according to the teaching materials should be developed based on a particular learning approach so that the learning activities undertaken has a foundation and clear direction.

Second, prototyping phase. This phase was undertaken by designing reading materials then validated by experts and practitioners. There was three things that became basic references to develop these reading materials. First, the results of the analysis at preliminary research stage, there was a needs analysis, curriculum analysis, concept analysis, and analysis of the students, that used as one of the basic materials development. This means reading materials prepared an answer to preliminary research analysis. Second, the approach used in preparing reading materials is CTL consisting of constructivism, inquiry, questioning, modeling, community learning, authentic assessment, and reflection. CTL's used will be visible on the presentation of instructional materials, content, and evaluation. Third, the rules for composing the materials are guided by the structure, the principles of compilation, and the steps of writing the materials. By considering the basics, the materials could be arranged systematically.

After the materials finished, took validation. Validation took by filling out the validation questionnaire of reading material that given to experts and practitioners. Aspects assessed are aspects of presentation, content feasibility, language accuracy, and display of reading materials. The validation results of reading materials by experts can be seen in table 2.

Table 2
Results of Reading Materials Validity By Experts

No.	Rated aspect	Score	Validity Value (%)	Category
1.	Contents feasibility	63	87.50	very valid
2.	Language accuracy	24	100.00	very valid
3.	Presentation materials	80	100.00	very valid
4.	Display of reading materials	27	84.37	very valid
Overall validation		194	91,50	very valid

Furthermore, the validation results of reading materials by the practitioner can be seen in Table 3.

Table 3
Results of Reading Materials Validity By Practitioners

No.	Rated aspect	Score	Validity Value (%)	Category
1.	Contents feasibility	10	83.33	very valid
2.	Language accuracy	11	91.66	very valid
3.	Presentation materials	16	100.00	very valid
4.	Display of reading materials	16	100.00	very valid
Overall teacher respons		53	94.64	very valid

Based on these data, the validity of reading materials by experts amounted to 91.50% categorized very valid. The validity of reading materials by the practitioner was 94.64% categorized as very valid. This was in accordance with the opinion Riduwan (2012, p. 15) which states that the value interval 81-100 very valid category. Thereby, reading materials of procedure text-based on CTL for the seventh-grade student at Junior High School already eligible materials consisting in terms of presentation, content feasibility, language accuracy, and display (Depdiknas, 2008, p. 28). Reading materials that worth it in terms of presentation, content feasibility, language accuracy, and display enable students to master the information and ideas in the text (López and Medina, 2016). Thus, the materials could be tested to the students and do an assessment to see practicality.

Third, the assessment phase. This phase done by assessing the level of practicality reading materials about procedure text. Practicalities of reading materials obtained after testing the product through one to one evaluation, small group discussions, and field test (the practicalities of reading materials by teachers and the practicalities of reading materials by the students overall). One to one evaluation took by practicing the materials to students who are capable, medium, and high. Small group discussion took by practicing the materials which have been designed for a group consisting of 5 persons. Field test took by a teacher and students who are 32 persons. Each student gets one material and uses them in the learning process. Test the practicalities of materials by students in all three phases is made after the students finished learning using materials. While the practicality of material assessment by teachers conducted during the learning takes place in this case, the teacher sees students learning with reading materials. Then, teacher assesses the practicality of teaching materials using a questionnaire that has been provided. Aspects considered in determining the practicality of teaching materials is the presentation, ease of use, readability, and the time spent in studying the reading materials. In summary, the results of one to one evaluation can be seen in Table 4.

Table 4
Results Practicalities of One To One Evaluation

No.	Rated aspect	Score	Practicality value (%)	Category
1.	Presentation	62	86.11	very Practical
2.	Ease in Usage	138	82.14	very Practical
3.	Readability	52	86.67	very Practical
4.	Time	27	75,00	Practical
Practicalities of One To One Evaluation		279	83.04	very Practical

Furthermore, the results *small group discussion* can be seen in Table 5.

Table 5
Results Practicalities of Small Group Discussion

No.	Rated aspect	Score	Practicality value (%)	Category
1.	Presentation	114	95,00	very Practical
2.	Ease in Usage	260	92.86	very Practical
3.	Legibility	93	93,00	very Practical
4.	Time	56	93.33	very Practical
Practicalities of Small Group Discussion		523	93.39	very Practical

The results practicalities of field test by students can be seen in Table 6.

Table 6
Results Pratikalitas Subjects By Students

No.	Rated aspect	Score	Practicality value (%)	Category
1.	Presentation	735	95,70	very Practical
2.	Ease in Usage	1713	95.59	very Practical
3.	Legibility	613	95,78	very Practical
4.	Time	365	95.05	very Practical
Practicalities overall Instructional Materials		3426	95.59	very Practical

The results practicalities of field test by teacher can be seen in Table 7.

Table 7
Results Pratikalitas Subjects By Teacher

No.	Rated aspect	Score	Practicality value (%)	Category
1.	Presentation	24	100.00	very Practical
2.	Ease of use	36	100.00	very Practical
3.	Legibility	8	100.00	very Practical
4.	Time	12	100.00	very Practical
Entire practicalities Instructional Materials		80	100.00	very Practical

Based on the results of the assessment phase, the value practicalities of reading materials on one to one evaluation was 83,04% that categorized as very practical. Practicalities of reading materials on small group discussion amounting to 93.39% categorized as very practical. Practicalities of reading materials on field test by students reached 95.59% with a very practical category. In addition, practicalities of reading materials were also obtained from the teacher, equal to 100.00% categorized as very practical. Overall, every test of practicality, reading materials categorized as very practical. This was in accordance with the opinion Riduwan (2012, p. 15) states that the interval 81-100 categorized as very practical.

According to Plomp (2007, p. 127) practical reading materials can be used properly and support student learning activities. That was, reading materials of procedure text-based on CTL for the seventh-grade student at Junior High School already practical learning solutions and can be used by students and teacher in learning to read procedure text. Reading materials easier for students to understand the concept or learning procedure text. Reading material also has a high degree of readability. In addition, reading materials can help students to learn in a relatively short time. Students can take advantage of study time effectively.

IV. CONCLUSION

Based on the results of the development was done, it can be concluded that the process of development of reading materials done through three stages are preliminary research, prototyping phase, and assessment phase has produced reading materials of procedure text-based on CTL were valid and practical.

First, designed reading materials have been declared valid in terms of presentation, content feasibility, language accuracy, and display. Reading materials, in terms of feasibility content, categorized as very valid by percentage 87.50%. In terms of language accuracy, materials was very valid categorized by percentage 100.00%. Review aspects of the presentation, materials categorized as very valid with a percentage of 100.00%. In terms of display aspect, materials categorized as very valid with a percentage of 84.37%. Overall, the validity of teaching materials amounted to 91.50% categorized as very valid. Based on the description that has been described, it can be concluded that the teaching materials designed valid and fit for use in learning to read procedure text.

Second, designed reading materials have been declared practical. Rate practicality takes from one to one evaluation, small group discussion, and field test. Based on the results of one to one evaluation, practicalities of materials obtained by 83,04% categorized as very practical. Furthermore, practicalities of materials on small group evaluation amount to 93.39% categorized as very practical. Practicalities of materials on field test by students amount 95.59% with a very practical category. In addition, the practicalities materials were also obtained from a teacher, amounting to 100.00% categorized as very practical. Thus, reading materials titled Understanding and Exploring Characteristic Procedure Text for seventh-grade students at junior high school is a practical learning solution regarding the material of the procedure text. Materials easier for students to understand the concept or learning procedure text. Reading material also has a high degree of legibility. In addition, materials can help students to learn in a relatively short time. Students can take advantage of study time effectively.

Based on the conclusions that have been presented, submitted suggestions as follows. First, it is expected the teacher to be able to use teaching materials designed and developed it further in accordance with the needs of students. Secondly, it is expected the students to be able to use materials that are designed optimally so as to understand better the procedure text material. Thirdly, it is expected that other researchers to make research results for comparison and reference in conducting research related to the development of good reading skills as well as the implementation of procedure text-based CTL approach in reading materials.

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