

DEVELOPING STUDENTS' WORKSHEET USING SCIENTIFIC APPROACH IN TEACHING READING GRADE EIGHT STUDENTS OF SMP CERDAS MURNI TEMBUNG

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ABSTRACT

This study concerns on how reading worksheet are developed for junior high school. This study was conducted by using Research and Development (R&D) design. It was started from collecting the data, analyzing data, designing course grid based on curriculum 2013, designing new reading worksheet, validating by experts, and revising for final product. The new students' reading worksheet was designed based on scientific approach stages, which is contained of five stages; observing, questioning, experimenting, associating, and communicating. The source of data of this study was the grade VIII students of SMP Cerdas Murni Tembung consisting 26 students. Instrument of collecting data were questionnaire, and interview. After analyzing data, the researcher got the students' need in learning English. The interview and questionnaire result proved that the students need students' reading worksheet which contains for grade VIII. The materials which were developed were focused on descriptive text, recount text, and narrative text. The product had been validated by the experts. The average scores are 3,8 from English subject teacher and 3,4 from English lecturer. It means the developing students' reading worksheet categorized as relevant for students of grade VIII.

Keywords: Research and Development (R & D), Students' Worksheet, Scientific Approach, Reading, Junior High School.

*Graduate Status

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1 INTRODUCTION

1.1 Background of the Study

English is one of subjects in curriculum. English is a tool to communicate verbally and write. Communicating is understanding and conveying information, thought, feeling, developing science, technology and culture. Communication skills are the ability to discourse, namely the ability to understand and produce oral or written texts which are realized in four skills language, namely listening, speaking, reading and writing. These four skills are used to respond or create discourse in

people's lives. Therefore English is directed to develop these skill sso that students are able to communicate and discourse in English at certain literacy level.

One of English skills is reading. Reading is a cognitive process that aim to find various information contained in writing so that the message to be conveyed by the author can be received by the reader. The first thing student do is observe the reading text that is read. From the observed text, there will be further curiosity about the text being read, so that questions will arise about the information from the text. After obtaining the information or data, then each information is linked so that answers are obtained and concluded. Based on this statement, learning English especially reading must refer to the principles of learning in the 2013 curriculum. One of them is scientific approach. The learning process with scientific approach is directed to "find out and do something",so that students can find their own understanding and competence by using scientific approach.

To apply the learning process with scientific approach the teacher should create a teaching material that requires students to be active. Teaching material is defined as anything that can be used to transmit messages or lesson content, stimulate students' thoughts, feelings, attention and abilities, so that it can encourage the teaching and learning process (Ibrahim and Syaodih, 2010).

One of the simple learning media that can be made by the teacher is student worksheet. According to Abdul (2012), student worksheets are sheets containing tasks that must be done by students. Student worksheets contain instructions for the steps students must take to complete the assignment. Student worksheets also help the teacher guide students to discover concepts through their own activities. With the existence of student worksheets, it is hoped the students can carry out learning activities and pour their creative ideas both individually and in group, be able to think critically and establish good cooperation with group members.

The use of student worksheet is expected to provide benefit in the learning process, this is as stated by Arsyad (2005) namely, 1) clarify the presentation of messages and information so that the learning process runs smoothly and improves learning outcomes, 2) increase student motivation by directing student attention so that it allows students to learn individually according to their abilities and interests, 3) the use of media can overcome the limitations of senses, space and time, 4) students will get the same experience about an event and allow direct interaction with the

surrounding environment. Not only that, through worksheets, students are expected to be motivated in reading.

In this case, the student worksheet that should be made by English language teacher can be based on a scientific approach. However, in reality there are not many teachers who use student worksheet in learning English, especially reading skill, as long as the 2013 curriculum is implemented in schools. Even if there are schools that use student worksheet as a learning resource, the contents are not in accordance with the scientific approach standard.

One of school that used student worksheet is SMP Cerdas Murni Tembung. Based on observation at SMP Cerdas Murni Tembung, it was found that the school has used the 2013 curriculum and has used student worksheet as a learning resource other than textbook. The student worksheets used are obtained from student worksheet provider. The student worksheet have been prepared based on the 2013 curriculum with scientific approach. The use of student worksheet in this school aims to summarize the subject matter and make students practice to better understand the subject matter.

From the result of interview with English teacher SMP Cerdas Murni Tembung, it was found that the existing student worksheets still needed development, especially in reading skill. The student worksheets that are used do not yet support the maximum learning skill to read because the content of the student worksheets is only the core material. The content of the student worksheets used is monotonous. There is no variation in the forms of activities that must be done by students even though there are several types of student worksheets that can be applied. Especially for reading skill, a type of activity is needed on student worksheets that stimulates students' reading skill. For maximum use, it is hoped that the development of student worksheet contents will be developed.

Based on preliminary observation which has been done at SMP Cerdas Murni Tembung, it was found that the existing student worksheet that used in learning process are not in accordance with the steps of the scientific approach. In the existing student worksheets there are only examples of text, list of questions and exercises to reconstruct a text, while the scientific approach consists of five steps, namely observing, questioning, exploring, associating, and communicating. In addition, the assignments in the existing student worksheets are not in accordance with the basic competencies that should be able to make students understand the social function, text

structure, and linguistic elements of the text. So it is necessary to develop student worksheets, especially for reading skills based on scientific approach.

Student worksheets based on scientific approach is student worksheet which content designed so that students actively construct concept through the stages of observing, formulating problems, collect data by various techniques, analyze data, draw conclusion and communicate the concept found. Scientific approach is intended to provide understanding to students with know, understand various materials using scientific approach, that information can come from anywhere, anytime, and does not depend on unidirectional information from the teacher, therefore the expected learning conditions created to encourage students to find out from various sources through observation. The application of scientific approach to learning involves process skills such as, observing, classifying, measuring, predicting, explaining, and concluding. In carrying out the process, help teacher is needed. However, the teacher's assistance must decrease with the increasing maturity of students or the higher the class of students.

This study was conducted by using developmental research (R and D) which is adapted from Borg and Gall (2003). This study was conducted by following six phases of R and D. They are gathering data, analyzing data, developing reading student worksheet, validating by the experts, revising, and final reading student worksheet.

The new student worksheet developed based on several aspects such as analysis of student needs through questionnaires, syllabus analysis, and interviews with teachers. After the data is obtained, then it is analyzed and student worksheets are compiled based on the steps of the scientific approach.

The using students' worksheet in learning English, especially reading skill based on scientific approach, guide students to learn inductively. Inductively learning effective help students develop higher order thinking and critical thinking skills. In inductive learning, the teacher directly provides presentations of information that will provide illustrations about the topics that will be studied by students. The steps in the scientific approach such as observing, asking question, experimenting, associating, and communicating make the teacher's role in delivering learning reduced so that it exercise students to learn independently. By learning independently students are given

the freedom to build their own concepts and expected to be better understanding learning material.

This research argues that by using good reading worksheet, the English learner will be able to understand reading material and activity participate in reading learning process. Worksheet is a media that aims to get learners to react to a teacher. It can be an excellent creative media to improve learner interest, ability as well as supporting factor for many parties who want to be able to use English in communicating. The researcher defined the learners need analyses pertinent to the learning material and the applying of the media. By developing of worksheets students are expected to bring a positive impact on the learning process, especially teaching reading grade eight students of SMP Cerdas Murni Tembung.

2 REVIEW OF RELATED LITERATURE

2.1 THEORICAL FRAMEWORK

1. Teaching Material

Ministry of National Education (2006: 4) states that teaching material is a set of material that is arranged systematically that allows students to learn and adapt to the existing curriculum. According to Ika Lestari (2013: 2) teaching material is a set of subject matter that refers to the curriculum used in order to achieve predetermined competency standards and basic competencies. According to Sungkono, et al (2003: 1) teaching material is a set of materials that contains learning material or content to achieve learning objectives. A teaching material contains subject matter in the form of ideas, facts, concepts, principles, rules, or theories that cover subjects according to their scientific discipline and other information in learning.

According to the Ministry of National Education (2008: 10), a teaching material is arranged with the following objectives:

- 1) Provide teaching materials that are in accordance with the demands of the curriculum
by considering the needs of students, namely teaching materials that are in accordance with the characteristics and social settings or environment of students.
- 2) Assist students in obtaining alternative teaching materials in addition to text books which are sometimes difficult to get.
- 3) Facilitating the teacher in carrying out learning.

In this case it can be concluded that teaching material is a set of materials compiled by referring to the curriculum in order to achieve the expected learning objectives, namely achieving competence or subcompetence with all its complexity.

2. Student Worksheets

Prastowo (2011: 204) states that student worksheets are printed teaching materials in the form sheets of paper containing material, summaries and instructions the implementation of learning tasks that must be done by students, who refers to the basic competencies that must be achieved.

Majid (2006: 176) states that student worksheets are sheets containing assignments that must be done by learners. The student activity sheet contains instructions or steps to complete a task based on a basic competency to be achieved.

Trianto (2010: 222) states that student worksheets is a guide for students who are used to doing investigation or problem solving. Student worksheets contains a set of activities what students must do to maximize deep understanding efforts to establish a basic ability according to achievement indicators certain.

From some of the definitions of student worksheets above, it can be concluded that the student worksheets is worksheet that contains questions that are refers to the basic competencies that must be achieved.

Types of Student Worksheets

According to Prastowo (2011:209) there are five types of student worksheet that used by students:

- 1) Student worksheets that help students find a concept.

This type of student worksheet contains what students have to do, including doing, observing, and analyzing. Therefore, teachers need to formulate steps that must be done by students, then the teacher asks students to observe the phenomenon of the results of their activities. Next, the teacher gives analytical questions that help students to relate the phenomena they observe to the concepts they will build in their minds.

- 2) Student worksheets that help students apply and integrate various Founded Concepts.

In learning process, after students have managed to find concepts, then teacher train students to apply the concepts that have been learned in daily life.

- 3) Student worksheets that function as learning guides.

This student worksheet contains questions whose answers are in the book. Students will be able to work on these student worksheets if they read a book, so the main function of this worksheet is to help students memorize and understand the learning material contained in the book. This student worksheet is also suitable for remediation purpose.

- 4) Student worksheets that function as strengthening

This student worksheet is given after the students have finished studying a topic. Learning material contained in this student

worksheet is more directed to the deepening and application of learning materials contained in textbook.

5) Student worksheets that work as practicum instructions

In certain materials there are activities that require practicum. Making work steps in practicums are usually arranged in a student worksheet. So in this student worksheet the practicum instructions are part of the student worksheets.

3. Scientific Approach

Scientific approach is a learning process that is designed so that students actively construct the concept of learning through the stages of observing, formulating problems, formulating hypotheses, collecting data with various techniques, analyzing data, drawing conclusions and communicating concepts (Imas Kurniasih, 2014: 29).

Scientific approach is an approach that gives students an understanding in knowing, understanding various materials using a scientific approach, that information can start anywhere, anytime, not dependent on unidirectional information from the teacher. Therefore it is expected that learning conditions are expected to create conducive learning so that it encourages students to find out from various sources of observation (Badan Pengembangan SDM Pendidikan dan Kebudayaan dan Penjamin Mutu Pendidikan, 2013:205).

From some explanations about definition of the scientific approach above, it can be concluded that the scientific approach is an approach that is intended to provide understanding to students to be able to find out and find their own information through the stages that began from observing, questioning, experimenting, associating, and communicating.

4. Reading

Reading is an interactive activity to understand the meaning contained in the material written (Somadyo 2011:1). Reading is a process that involves physical activity and mentally. One of the physical activities in reading is when the reader moving the eye along the lines of writing in the reading text. Reading involves mental activity which guarantees acquisition understanding becomes maximum. Reading is also a thinking activity for understand writing (Nuriadi 2008:29).

Based on the defenition of reading described above, it can be concluded that reading is a process that is carried out as well used by readers to get the message the writer wants to convey through written language. By reading, readers get many benefits. These benefits, namely that it can expand their knowledge and explore messages written contained in the reading material.

5. Student Worksheet Based on Scientific Approach

Learning with scientific approach is a learning process designed so that students actively construct concept through the stages of observing, formulating problems, collect data by various techniques, analyze data, draw conclusions and communicate the concepts found. Scientific approach is intended to provide understanding to students with know, understand various materials using a scientific approach, that information can come from anywhere, anytime, and does not depend on unidirectional information from the teacher, therefore the expected learning conditions created to encourage students to find out from various sources through observation.

The application of scientific approach to learning involves process skills such as, observing, classifying, measuring, predicting, explaining, and concluding. In carrying out the process, help teacher is needed. However, the teacher's assistance must decrease with the increasing maturity of students or the higher the class of students.

3. RESEARCH METHODOLOGY

This study was conducted by using developmental research (R and D) which is adapted from Borg and Gall (2003). R and D is one of research design aim to develop and validate the educational products, like curriculum, syllabus, textbooks, instructional media, modules, assessment instrument, etc. (Borg and Gall, 2003).

This study was conducted by following six phases of R and D. They are (1) gathering information and data, (2) analyzing data, (3) developing material, (4) validating by the experts, (5) revising, (6) final product. This study was applied in SMP Cerdas Murni Tembung. The subject of this study was the grade VIII students of SMP Cerdas Murni Tembung. There were 26 students in the class. In this study, the researcher gathered the data by using questionnaire and interview.

1. Questionnaire

The needs analysis questionnaires were distributed to twenty six students of grade VIII. The questionnaire consisted of a number of questions which covered the reading of the students' needs. The needs analysis was conducted on April 5th, 2021 at SMP Cerdas Murni Tembung.

2. Interview

Based on the result of interviewing the English teacher SMP Cerdas Murni Tembung, the researcher gathered the data that learning English process used an English worksheet entitled "Efektif". The exercise from the worksheet is not appropriate for the students, exactly in reading skill.

The teacher also stated that, one of the students' difficulties in learning English is to comprehend the English text. It is caused by the instructions of doing the exercises in the student worksheet by the text not clear. By that reason, the teacher said that developing of students' reading worksheet is needed for the students to exercise them to finish the task based on scientific approach which is need by the students of 2013 curriculum.. The reading

text which are needed to develop are the text related to their needs and completed with pictures. So, the students will be more interested to follow the learning process.

A. The Technique of Analyzing Data

After getting some data, the next process is analyzing data. The data that have been found from any instruments will be analyzed to get the result about how is the develop student worksheet using scientific approach in teaching reading for grade eight students of SMP Cerdas Murni Tembung. The researcher analyzed data which is obtained from questionnaire, interview and analyzed the syllabus also existing students' worksheet.

1. Analyzed the questionnaire: the questionnaire is given to students to find out what students needed related to good worksheets, especially in reading skill.
2. Analyzed the interview: Interview will be administered to the teacher to get related data. Then, the data will be tabulated in order to obtain the best solution in terms of preparing what the student worksheets are appropriate for the students in SMP Cerdas Murni Tembung, especially in Grade Eight English student worksheets.
3. Analyzed the syllabus and existing students' worksheet: In this part the researcher saw the basic competence and the students' worksheet in order to find the problems.

4. DATA ANALYSIS, FINDINGS AND DISCUSSION

a. DATA ANALYSIS

This study was conducted to develop student worksheet using scientific approach in teaching reading for grade eight students of SMP Cerdas Murni Tembung. After getting the data, the researcher designed the course grid. The course grid was written in accordance to the highest percentage of the need analysis. The course grid was written as the guideline for developing the reading worksheets. The researcher wrote the course grids of descriptive texts, recount texts, and narrative texts . It was designed based on the Curriculum 2013. The next step after designing course gride is designing new students' reading worksheet. The main point was the reading text worksheets given should relate to their indicator learning. It was done not only to meet the students' need in their learning process and increasing academic ability, but also to make the students' will be easy in comprehending the worksheets. The next step after the researcher developed the new reading materials, and then it was evaluating the appropriateness of the draft according to the criteria released by BSNP. The expert judgment was done by distributing the expert judgment questionnaire to the materials expert. The last step is final product. The final product consists of 3 worksheets based on 5 stages of scientific approach. The worksheets were design based on the five stages of Scientific Approach, namely observing, questioning, experimenting, associating, and communicating. The following table describes the outline of the worksheet unit design in the developed reading worksheet. The researcher revised the products based on the suggestions and comments of the first draft of the materials from the expert. After that, the development of reading worksheet was done. The reading texts worksheets were valid to be used in teaching learning process by students of grade VIII at SMP Cerdas Murni Tembung.

b. FINDINGS

The findings of this study for developing student worksheet in teaching reading will be shown as below:

The findings of this study provide the evidence that there must be a link in the worksheet. This finding supports the results of Arif and Napitupulu (1997:36) that there are four criteria for selecting teaching materials.

1. The first criterion is that the teaching materials are in accordance with the learning objectives, meaning that the selected teaching materials support learning activities.
2. The second criterion is useful and in accordance with the child's development, meaning that the selected teaching materials can increase student motivation in participating in learning.
3. The third criterion is easy to understand, meaning that the material and the use of language easy for students to understand
4. The last criterion is systematically arranged, meaning that teaching materials are presented in a systematic order.

c. DISSCUSSION

The purpose of study is to find out the students' needs and develop the students' reading worksheet for grade VIII students in SMP Cerdas Murni Tembung which are based on Scientific Approach. The worksheets developed by the writer are appropriate and related to syllabus since it is based on their need analysis. Based on the previous analysis, it was found that the exercises are not to serve the students' needs in SMP Cerdas Murni Tembung. The students' reading worksheet should be more relevant to students' level and syllabus.

The researcher developed students' reading worksheet in this research because the exercise of reading student worksheets are not appropriate with 2013 curriculum for grade VIII in SMP Cerdas Murni Tembung. The English students' reading worksheets were developed to bring it into line students'

needs. First, the researcher analyzed the syllabus and the student worksheet that the students use in SMP Cerdas Murni Tembung. Then, the researcher used, questionnaire and interview to gather the data or information. After that, the researcher designed the new reading student worksheet based on scientific approach.

The new reading student worksheet consist of three units, namely descriptive text unit, recount text unit, and narrative text unit. Each unit there are learning objectives that has function to inform out put expected after learning. The main parts of the units can be described as follows. In observing section, it contains of a number of tasks in which the tasks are provided in order to help students become familiar with the vocabulary and language features that are going to learn by reading, listening, scrutinizing and observing the pictures. In questioning part, it contains of a number of tasks in which the tasks are provided in order to add some information about object being observed and questioning the differences of the language features. In experimentin part, it contains of a number of tasks in which the tasks are provided in order to let students trying something new and implement what they have observed. In associating part, it contains of a number of tasks in which the tasks are provided in order to make the data or knowledge that students have learn becomes a memory in their thought and the last, in communicating part, it contains of a number of tasks in which the tasks are provided in order to make students be able in reading skill and convey the information that has been learned about conceptual understanding or conclusion in form of oral and/ or written chart, diagram, picture or text.

5. CONCLUSION AND SUGGESTION

a. CONCLUSION

The students' reading worksheets were developed by adjusting the existing students' worksheets with the basic competency demands and the students' needs. The needs analysis was conducted on April 5, 2021 to identify the students' needs of the Grade VIII students of SMP Cerdas Murni Tembung. There were 26 students as respondents in the grade VIII.

Students' worksheets were developed using scientific approach by following the R and D steps according to Borg and Gall. In this case, the researcher simplified the steps through seven phases to create appropriate students' reading worksheet based on students' needs. Those seven phases were gathering the data, analyzing the data, designing the course grid, designing the material, evaluating or validating the material, revising the material and the last, final product.

The final product design produced were students' worksheets using scientific approach for the reading skill of grade VIII students SMP Cerdas Murni Tembung. The students' reading worksheet consist of three units namely descriptive text, recount text and narrative text. The contents of the students' reading worksheet consist of learning objectives, meaning, generic structure, language features and language focus of the text. On the next page there were activities observing, questioning, exploring, associating and communicating. In the last page of the students' reading worksheet there was a reflection activity for student.

Then, the students' reading worksheets were validated by the experts. The result of the experts evaluation were shown that the mean value from all aspects (the appropriateness of the content, language, presentation, and layout) is 3.5. It can be concluded that the materials was categorized as "Very good" since the position of the mean value is in the interval $3.25 < x < 4$. From the experts evaluation, it could be concluded that the developed students' worksheet based on Scientific Approach was appropriate to be used by VIII grade students of SMP Cerdas Murni Tembung.

b. SUGGESTION

After the researcher carried out the research, she would to give sugesstion related to the result of this research.

1. It is suggested that the students' needs to be considered in developing student worksheet and syllabus because the development of new student worksheet depend on students' needs, especially in teaching reading skill grade eight students.
2. It is suggested that English teacher should apply this student worksheet design in order to see in efficiancy and in effectiveness of the design and better improvement should be made. So the developer of the student worksheet, should be based on the student' needs.
3. It is suggested to other researchers should conduct further studies on deriving syllabus or material, which has very close reference to the students' needs. In order to see efficiency and effectiveness of the students worksheet development and to make variety of teaching materials.

REFERENCES

- Abdul Majid (2012). *Belajar dan Pembelajaran*. Bandung: PT Remaja Rosdakarya
- Arif, Z., & Napitupulu, W. P. (1997). *Pedoman baru menyusun bahan ajar*. Jakarta: Gramedia
- Arsyad, A. (2011). *Media pembelajaran*. Jakarta: PT Raja Grafindo Persada
- Borg, W.R. & Gall, M.D. (1983). *Educational research: an introduction*. 4th Edition. New York: Longman Inc.
- Ibrahim, R. (2010). Nana Syaodih S. *Perencanaan Pengajaran*. Jakarta: Rineka Cipta
- Kurniasih, I., & Sani, B. *Jakarta Raja Grafindo Persada..* (2014). *Implementasi kurikulum 2013: konsep & Penerapan*. Surabaya: Kata Pena.
- Lestari, I. (2013). *Bahan Ajar Berbasis Kompetensi*. Jakarta: Rineka Cipta.
- Majid, Abdul (2006) *Perencanaan Pembelajaran Mengembangkan Standar Kompetensi Guru*. Bandung: PT. Remaja Rosdakarya.
- Nuriadi (2008) *Teknik Jitu Menjadi Pembaca Terampil*. Yogyakarta: Pustaka Pelajar.
- Prastowo, A. (2011). *Pengembangan Bahan Ajar Inovatif*. Yogyakarta: Diva Press
- Somadyo, Samsu (2011) *Strategi dan Teknik Pembelajaran Membaca*. Yogyakarta: Graha Ilmu.
- Sungkono.(2003). *Pengembangan Bahan Ajar*. Yogyakarta: FIP UNY.
- Trianto (2010) *Mendesain Model Pembelajaran Inovatif-Progresif*. Jakarta : Penerbit Kencana