

**DEVELOPING READING MATERIALS OF DESCRIPTIVE TEXT
BASED ON SCIENTIFIC APPROACH FOR TENTH GRADE
STUDENTS OF COMPUTER NETWORK ENGINEERING
AT SMK MULTI KARYA MEDAN**

*SUSANTRI LECESTER

** Drs. Elia Masa Ginting S, M.Hum.

ABSTRACT

Leicester, Susantri. Registration Number: 2133321032. Developing Reading Materials of Descriptive Text Based on Scientific Approach for Tenth Grade Students of SMK Multi Karya Medan. A Thesis. English Educational Program, State University of Medan, 2020.

This study deals with the reading materials development for the first grade students at SMK Multi Karya Medan. The research conducted by Research and Development (R & D). It was developed through six stages; 1) Gathering the data & information, 2) Analyzing the data, 3) Designing a new reading materials, 4) Validating by experts, 5) Revising a new reading materials and 6) Final product. It was conducted at SMK Multi Karya Medan, the subject of this research was X grade students of Computer Network Engineering Study Program. The objectives of this study are to investigate the students' need and to develop the appropriate reading materials for the students. The data were gathered by administering interview to English teacher and distributing questionnaire to 25 students. The interview and questionnaire results prove that the students need English reading materials which is contained the appropriate knowledge or topic with the Computer Network Engineering study program, syllabus and students' level. The developed materials are descriptive text. The three topics of descriptive text have been developed, the topics are about Bill Gates, Computer History Museum, and Sillicone Valley. The development of reading materials in descriptive texts are based on Hutchinson and Waters theory through 4 stages, such as; defining objectives, creating the framework, designing the model of reading materials and refining the model of reading materials. The new reading materials are validated by two experts, they are English lecturer and and English teacher. The average scores of validation are 4.3 from English lecturer and 4.2 from English teacher. It can be concluded that the developing materials categorized as relevant or appropriate for tenth grade students of Computer Network Engineering Program.

Keywords: *Research and Development (R & D), Reading Materials, Vocational School, Computer Network Engineering Study Program*

*Graduate Status

**Lecturer Status

I. INTRODUCTION

A. Background of the Study

Reading is one of the important language skills besides speaking, listening and writing that should be learnt in English learning process. Reading has the considerable role in the language teaching to strengthen the skills which are acquired by the students in listening, speaking, and writing (Maxom, 2009: 139). According to Snowling and Hulme (2011) reading is a primary goal of learning education, in which the goal of reading is to get the competence in understanding and comprehending the text. Reading is also an active process that requires a great deal of practice and skill.

Reading is needed for students in vocational high school especially for computer network engineering students. They need to learn appropriate materials based on their needs about computer network engineering. The students of computer network engineering should be mastery english language skill especially reading in programming computer network engineering because it will help the students to be competent at their job in the future. However, in fact the students have not learned the appropriate material related to their major in the school.

Based on the writer's preliminary observation by interviewed the English teacher, about the curriculum, syllabus and the English textbook that were used for the 10th grade students of computer network engineering at SMK Multi Karya Medan. The textbook used for 10th grade students is given by the government entitled "*Bahasa Inggris*" published by "*Pusat Kurikulum dan Perbukuan Balitbang, Kemendikbud 2016*", revised edition of curriculum 2013. Based on the data from the textbook, it shows that the reading materials are not appropriate

with the students need. The students found that they had difficulties in understanding and comprehending the materials, especially in descriptive text. It is because of the fact that descriptive texts in their textbook are very general. So, they have less motivation in learning English. The teacher admitted that student need specific reading materials which is related to computer network engineering program.

Based on the the observation above, the reading materials of descriptive text is not relevant to the students major. The reading materials like: "*Tanjung Puting National Park*", "*Taj Mahal*", and "*Visiting Niagara Falls*" are not related to computer network engineering study program. Because of all the topics of the text are unrelated with their needs and program, meaning the function of English for Specific Purposes (ESP) can decrease the problem. The adaptation of reading texts to be related to the students' needs and program is actually the application of English for Specific Purposes (ESP). Richards (2001 : 28) states that the concern to make language courses more relevant to students needs leads this period to emergence of ESP. Through ESP the teachers can analyze their students' need and they also can design the appropriate reading materials for their student, so the students will get the relevant materials base on their study program, the texts will be interesting for the students and finally the students can improve their knowledge by having suitable reading materials.

Based on the explanation above, the researcher is interested in developing English reading materials Reading materials of descriptive text for Grade X students of SMK Multi Karya Medan and hopefully it can help the teaching and learning process of reading in order to improve and develop the students reading skill in the future based on their needs.

II. REVIEW OF LITERATURE

A. Theoretical Framework

In supporting the idea of this study, the research presented some books containing information and theories that helped the researcher to design this thesis. Theories are needed to explain some concept applied in this resesarch.

1. Reading

There are some definitions of reading by some experts. According to Winch (2006), appointed that Reading is the process of constructing meaning from a text, whether written or graphic, paper-based or digital. The text may be wholly-printed as in most novels, or contain visual elements such as illustrations, diagrams, maps, and many information books, magazines, and newspaper. According to (Berardo, 2006), It is something that we do every day, it is an integral part of daily lives, taken very much for granted and generally assumed to be something that everyone can do.

2. Descriptive Text

According to Dirgeyasa (2014) Description or descriptive etymologically is derived from the word describe. Describe means to draw, to illustrate or to picture object, place, and person in order to have visual appearance of the object described.

a. Social Function

The social function of descriptive text is to describe a person, place or thing in such a way that a picture is formed in the reader's mind.

b. Generic Structure

According to Dirgeyasa (2014) the generic structure of Descriptive Text will be shown in this table below:

Textual elements	Functions
Identification	<ul style="list-style-type: none">• It is a statement describing and illustrating about the topic/theme to be described.• Statement must be interesting and is able to attract and to provoke the reader so that the reader becomes interested in reading the complete description.• The use of adjective and degree of comparison of adjective is advisable.
Description	<ul style="list-style-type: none">• It is a complete description about the topic/theme proposed in identification text.• Description is the detail description or elaboration of the topic or theme as described in the identification.

c. Language Features

- It uses present tense and present perfect tense.
- It uses adjective to describe or illustrate the condition of the topic/theme described and It uses passive sentences.
- It uses attribute and identifying process (Dirgeyasa, 2014)

3. English Specific Purpose

Based on Hutchinson's and Water's theories, English for Specific Purposes (ESP) is a way of teaching and learning English for specialized subjects with some specific vocational or educational purpose in mind. There are different needs for different purposes (and learners) of English language, such as: English for Business, English for Economics, English for Culinary and Art, English for Secretary, English for Technicians and others.

According to Hutchinson & Waters (1987:54), there are two kinds of needs in ESP :

1. Target Needs

Target needs belong to what the learners need to do in the target situation. It is more useful to look at target situation in terms of *necessities*, *lacks* and *wants*.

a. Necessities

Necessities are the needs of learners to know the knowledge demanded by the target situation where they are involved.

b. Lacks

Lacks are defined as the gap occurs between the difficulties and the necessities. When learners cannot achieve the necessities that concern the demanded knowledge, there are lacks that become the reasons.

Wants

Wants are defined to what learners need from an ESP course. Here before starts designing an ESP course, teachers and material developers have to know what are needed by the learners from joining an ESP course.

2. Learning Needs

Learning needs refer to what students should do to achieve the target situation. When the learners have already known what their goal of study, the difficulties they have, and other things they want to know, there is also must be a route or road to link them. Through knowing the learning needs, a course designer should consider some other aspects such as the condition of the learning situation, the existing knowledge and skills, and the motivation of learning English. Learning needs also tell which learning methods and learning materials students have to learn in order to achieve the target situation.

4. Material Design

According to Hutchinson and Waters (1991), Material writing is one the most characteristics features of ESP in practice. Here the techniques for producing useful and creative ESP materials:

4.1 Defining objectives

We can start by asking ourselves the questions: What are materials supposed to do? In defining their purpose, we can identify some principles which will guide us in the actual writing of the materials. Materials provide a stimulus to learning. Good materials do not teach: they encourage learners to learn. Good materials will, therefore, contain: Interesting texts, Enjoyable activities which engage the learners' thinking capacities, Opportunities for learners to use their existing knowledge and skills, Content which both learner and teacher can cope with.

4.2 A Materials Design Model: Framework

Taking into account the pinciples we have outlined, we can now present a model which we have used for writing our own materials. The aim of this

particular model is to provide a coherent framework for the integration of the various aspects of learning, while at the same time allowing enough room for creativity and variety to flourish. The model consists of four elements:

- a. Input: This may be a text, dialogue, video-recording, diagram or any piece of communication data, depending on the needs you have defined in your analysis. The input provides a number of things: stimulus material for activities, new language items, correct models of language use, a topic for communication, opportunities for learners to use their information processing skills, opportunities for learners to use their existing knowledge both of the language and the subject matter.
- b. Content Focus: Language is not an end in itself, but a means of conveying information and feelings about something. Non-linguistic content should be exploited to generate meaningful communication in the classroom.
- c. Language Focus: Our aim is to enable learners to use language, but it is unfair to give learners communicative tasks and activities for which they do not have enough of the necessary language knowledge. Good materials should involve both opportunities for analysis and synthesis. In language focus learners have the chance to take the language pieces, study how it works and practice putting it back together again.
- d. Task: The ultimate purpose of language learning is language use. Materials should be designed, therefore, to lead towards a communicative task in which learners use the content and language knowledge they have built up through the unit.

The primary focus of the unit is the task. The model acts as a vehicle which leads the learners to the point where they are able to carry out the task. The language and content are drawn from the input and are selected according to what the learning will need in order to do the task. It follows that an important feature of the model is to create coherence in terms of both language and content throughout the unit. This provides the support for more complex activities by building up a fund of knowledge and skills.

4.3 A Materials Design Model: Sample Materials

The basic model can be used for materials of any length. Every stage could be covered in one lesson, if the task is a small one, or the whole unit might be spread over a series of lessons. In this part, we will show;

4.4 Refining the Model

A number of possible refinements to the model can be seen in the unit above. We can relate these points to the nucleus of the model to provide an extended model like this.

5. Scientific Approach

Scientific approach is a body of techniques for investigating phenomena, acquiring new knowledge, correcting and integrating previous knowledge. According to Zaim (2017) this approach allows teachers to improve the process of learning by breaking the process down into steps or stages which contains detailed instructions for conducting students learning. According to Zaim (2017), there are five steps of applying scientific approach in teaching learning process :

a. Observing

In observing, there are two main activities that should be done to lead to the observing steps. First, the teacher gives students a wide opportunity to do observation. The observation can be done through reading, listening, or seeing the object. Second, the teachers facilitate the students to do observation and train the students to observe the important things from the object. There are seven steps in observing process, (1) determining the object to be observed, (2) determining the purpose, (3) determining the way of observation, (4) limiting the object, (5) doing observation carefully, (6) reporting the result of observation, and (7) comprehending the result.

b. Questioning

In Questioning, the functions to encourage and inspire learners to actively learn and develop questions of and for itself; to raise skills of students in talking, asking questions, and the other can answer logically, systematically using proper and correct grammar; to encourage students' participation in discussing, arguing, developing the ability to think and draw conclusions; and to build an attitude of openness to give and receive opinions or ideas, enrich vocabulary, as well as developing social tolerance in gregarious.

c. Experimenting

In experimenting, the steps are preparation, working, and follow up. There are five activities that can be done in experimenting, (1) grouping students into several groups, (2) asking students to discuss, (3) recording the finding, (4) supervising the learning process to ensure that all learners are actively involved in the discussion, and (5) directing the group that need a help.

d. Associating

In associating, the ability is to analyze and associate the information occurred within the group. Associating is the process of analyzing the information to find the relationship between one to other information and to find the patterns of interrelationship of the information so that one can make conclusion from the patterns found.

e. Communicating

In communicating, the ability is to conclude the facts that have been observed and experimented. There are four activities that can be conducted in communicating steps, (1) asking the students to read their work to the class, (2) asking each group to listen well and provide additional input with regard to the work of each group, (3) giving explanation after the group discussion ended, and (5) structuring tasks and providing opportunities to the students to demonstrate attitude, skills, and understanding of the substance of learning given.

III. RESEARCH METHODOLOGY

This research was conducted based on educational research and development (R & D). Educational research and development (R&D) is a process to develop and validate educational process. Borg and Gall (2003) state that R & D is one of research designed aimed at developing and validating educational products, like curriculum, syllabus, textbooks, instructional media, modules, assesment, etc. This research was conducted by following five phases of R & D, they are :

1. Gathering the data and information.
2. Analyzing the data and information.
3. Designing new reading materials.

4. Validating new reading materials.
5. Revising new reading materials.
6. Revised – developing reading materials (final products).

IV. RESEARCH FINDINGS AND DISCUSSIONS

A. Research Findings

After the writer was done analyzing the data, the writer found some findings in this research. The reading materials were used by 10th grade students of SMK Multi Karya Medan especially in Computer Network Engineering program was “Buku Bahasa Inggris” published by Pusat Kurikulum dan Perbukuan, Balitbang, Kemendikbud 2016 of revised edition. The descriptive texts in the existing textbook were “Tanjung Puting National Park”, and “Taj Mahal” and “*Visiting Niagara Falls*”. These topics were not appropriate with Computer Network Engineering program because the English reading materials were not related to their major and were not represented the other kinds of descriptive text like the statement in reading competences (3.7) and (4.9). They were not interested to read because the existing material did not provided the different kind of descriptive text, such as; describing person or place.

B. Discussion

Based on the previous analysis, the researcher developed three topics which are suitable to the students Computer Network Engineering study program. They are : Bill Gates, Computer History Museum, and Silicon Valley. The material developed by the researcher are appropriate and related to the students’ interest since it is based on the their needs analysis. The material developed help the students to have new vocabularies which are related to their major, help the

students comprehend the text to improve their reading skill because the materials that they learn based on their major.

Another research that related with this topic about develop reading materials was research journal from Vabiola, K & Fitrawati (2018). The results show that in teaching reading descriptive text the teacher should use an appropriate material and technique that can make the students interested in learning and improving their ability in reading descriptive text.

V. CONCLUSION AND SUGGESTION

A. Conclusion

It can be concluded that the development of the appropriate descriptive text is needed for X students of Computer Network Engineering at SMK Multi Karya Medan. The descriptive texts are developed based on scientific approach. The developed reading materials is proved by the validation of two experts. The average scores are 4.3 or 85% from English lecturer as the first validator and 4.2 or 81% from English teacher as a second validator. It is categorized as “good” means that the developed reading materials is appropriate for first grade students of Computer Network Engineering study program at SMK Multi Karya Medan.

B. Suggestion

In line with the conclusion above, some suggestions are recommended as follows:

The English teacher of vocational high school should consider the students need with their major. The English teacher should be more creative to developed the relevant materials based on the needs of Computer Network Engineering

students or to make the students be easier to understand the reading comprehension and make the the succesful learning process in the class.

The students should get the appropriate textbook and related to their needs because it makes the students interest to learn English. The developed reading materials for X grade students of Computer Network Engineering at SMK Multi Karya Medan will help the students easier in study English.

To other researcher who do the same study should find many references to develop the reading materials for Computer Network Engineering study program.

REFERENCES

- Berardo, S. A. 2006. *The Use of a Authentic Materials in the Teachingof Reading*. The Reading Matrix Vol.6, No.2.
- Dirgayasa, I. W. 2014. *EMIC WRITING a genre based perspective*. Indonesia : Unimed Press.
- Gall, Gall and Borg. 2003. *An Introduction Educational Research (Seventh Edition)*. New York : Longman.
- Hutchinson, T and Waters, A. 1987. *English for Specific Purposes*. United Kingdom: Cambridge University Press.
- Maxom, Michelle. 2009. *Teaching English as a Foreign Language For Dummies*. England: John Wiley & Sons, Ltd.
- Richards, Jack. C. 2001. *Curriculum Development in Language Teaching*. Cambridge : Cambridge University Press.
- Snowling, M. J., & Hulme, C. 2011. *Evidence-Based Interventions for Reading and Language Difficulties : Creating A Virtuous Circle*. British Journal of Educational Psychology 81, 1-23.
- Vabiola, K and Fitrawati. 2018. *Teaching Reading Descriptive Text by Using Tree Mapping for Senior High School Students*. Journal of English Language Teaching, 7(4), 742-754.

Winch, G., Johnston R. R., March, P., Ljungdahl, L., & Holliday, M. 2006. *Literacy, Reading, Writing, and Children's Literature (Third edition)*. Australia: Oxford University Press.

Zaim, M. 2017. *Implementing Scientific Approach to Teach English at Senior High School in Indonesia*. *Asian Social Science*, 13(2), 33-34. doi: 10.5539/ass.v13n2p33.