

Developing English Reading Descriptive Text Materials Based on Scientific Approach for Grade X Students of Computer and Network Engineering Study Program at SMKS Harapan Al-Washliyah Sigambal

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ABSTRACT

The objective of this study was to develop materials of reading descriptive text as supporting learning for grade X computer and network engineering students at SMKS Harapan Al- Washliyah Sigambal. The research was conducted by using the simplification of Research and Development theory by Borg and Gall (2003) which simplified by Puslitjaknov (2008). The data was taken through observation, questionnaires, and interview. The materials were validated by an English lecturer and an English teacher by using validation sheets which is adapted from BSNP. The data were collected by using descriptive analysis and the materials were arranged based on Scientific Approach. The study' results revealed that: (1) the materials used do not support the students study program because the topics of the materials are still considered general, (2) relevant reading materials are needed by students in vocational school especially in computer and network engineering study program, (3) the developed reading materials based on Scientific Approach have been validated with the score 3.52 from the first expert and 3.65 from the second expert which is in the range of $3.25 < \bar{x} \leq 4.00$ and categorized as "Very Good". The reading descriptive text materials have been developed in accordance to the students' needs based on Scientific Approach.

KEYWORDS

Research and Development (R&D); English Reading materials; descriptive text; scientific approach; vocational school; computer and network engineering program.

INTRODUCTION

Reading is an action carried out by the reader to acquire information from the writer through words or written languages. As one of the receptive skills alongside listening, reading performs a vital role in English Language Teaching (ELT). It enables the students to understand the learning materials and improve their knowledge, comprehension, grammar, vocabulary and fluency. Even further than that, reading can also enhance students' cognitive skills, such as working short- term and long-term memory (Abusamra et al., 2020).

The English language' basic skills are consisted of speaking, listening, writing, and reading. In the English Foreign Language (EFL) countries context, the focus of ELT is usually more on reading skills. It is because English is not used or spoken daily so that the students tend to prefer information in the form of written texts. Moreover, Hidayat and

Setiawan (2020:176) imply that reading is a fundamental English language skill that EFL learners must possess because by reading, they can get more information and vocabulary to strengthen their English skills, expand their knowledge and insight in other fields.

As a country that taught English as a foreign language, schools in Indonesia also focus more on reading skills in their learning activity. It can be seen from the dominant activities of reading in the classroom where the teacher usually taught their students to read the materials and answer the questions. In addition, from school to national examination, reading is the most dominant type of English examination, which requires the students to understand the text and question. Thus, in regard to the position of English as a foreign language in Indonesian context, it is essential to review the essence of English reading and readers in Indonesia (Rahyuningsih, 2016).

When it comes to reading, it cannot be separated from the texts as materials. There are at least 13 basic types of text in English. Those texts are narrative, recount, descriptive, report, analytical exposition, hortatory exposition, discussion, news item, review, explanation, procedure, anecdote, and spoof. Each text has different purposes and specific functions that can be applied by the teacher as learning materials in the classroom. However, paying attention to the contents of the texts used as materials in the learning process are crucial.

According to Hanifah (2019), the students have to learn using suitable materials with their study program to accomplish a good English capability. In harmony with this statement, Richards (2001) suggests that material should serve the basics of lessons' content, equilibrium of abilities educated, and the sorts of language practice students participate in. Therefore, it is necessary to give proper materials to the students based on their study program. Unfortunately, most schools in Indonesia are not using appropriate materials for their students' majors, primarily vocational high schools.

As one of the secondary school categories, vocational high school has special educational purposes for their students. They are prioritized to master vocational practices so that usually every graduate has expertise in a field. Considering these facts, the materials used to teach the vocational school students should have distinguished based on their study programs, goals and needs in learning. Nevertheless, in reality, the majority of the students in vocational schools are using the same materials in learning English as students in general.

SMK Swasta Harapan Al-Washliyah, as one of the vocational high schools in Sigambal, Rantau Selatan, has only one department, which is computer and network engineering. The students in this school are expected to master the four skills of English, especially reading skills. With such demands, the students in computer and network engineering study program really need to be facilitated with proper materials in English reading to achieve the intended goals. Furthermore, they also need to learn English using materials containing technical terms and knowledge of their major in order to be beneficial for them in real life.

Unfortunately, based on the preliminary observation conducted by the researcher, the materials are not designed specifically for some vocational school. Further, the preliminary interview with the teacher revealed that the curriculum 2013 has been implemented in this school. Nonetheless, the teacher did not use the textbook developed by the government. She uses a textbook entitled "Forward an English" by Erlangga for vocational school Grade X students. Alas, this textbook's contents also have no relation with computer and network engineering students.

Additionally, based on the interview with the teacher, the dominant text materials used in learning process are descriptive texts. However, the existing materials in the textbook are irrelevant for students in the computer and network engineering study program. Some

topics in the textbook are “Kuta Beach” and “Stonehenge”. These texts are aimed to describe a tourism place and an ancient building. While on the contrary, the students need materials that closely integrated to their study program. In this context, the materials above should have accurately talked about places that have relationship with computer and network in order to give helpful information and terms related to students’ major.

Based on the problem mentioned above, the researcher developed English reading descriptive text materials based on the needs of the students in grade X of the Computer and Network Engineering study program at SMK Swasta Harapan Al-washliyah Sigambal. The researcher believed that if the students are taught using relevant reading materials, it will be easier to apply them in their real lives.

LITERATURE REVIEW

Cline, John, and King (2006:2), state that reading is decoding and understanding written texts. Decoding requires translating the symbols of writing into the spoken words which they represent. Understanding is determined by the purposes for reading, the context, the nature of the text, and the readers’ strategies and knowledge.

Hutchinson and Waters (1987) define ESP as an approach to language teaching which aims to meet the needs of particular learners. Graves (2000) defines that Material Development means creating, choosing or adapting, and organizing materials and activities so that the students can achieve the objectives that will help them reach the goals of the course.

Materials mean anything which is used to help to teach language learners. Materials can be in the form of a textbook, a workbook, a cassette, a CD-ROM, a video, a photocopied handout, a newspaper, a paragraph written on a whiteboard or anything which presents or informs about the language being learned (Tomlinson, 1998:21).

According to Dudley Evans and St. John (2009), the students’ needs are referring to eight components. Nevertheless, it is better only focus on subjective need analysis component.

RESEARCH METHODS

This research used the simplification of research and development (R&D) method by Borg and Gall. The simplification is based on Puslitjaknov (2008). According to Borg and Gall (1983), R&D is an educational research method applied in developing and validating educational products. Thus, in this research, there were only six steps of R&D method applied, namely: 1) Collecting information and data, 2) Analyzing data, 3) Designing the product, 4) Validation of the product, 5) Revising the product, and 6) Final product.

RESULTS AND DISCUSSION

The research findings are intended to answer the research’ questions of the study to develop English reading descriptive text material based on scientific approach for grade X students of computer and network engineering study program at SMKS Harapan Al-Washliyah Sigambal. The first question is “What descriptive texts materials are needed.” The second question is “How do the suitable English reading descriptive text materials developed using scientific approach?.” From the data analysis, it was revealed some results as explained below.

Descriptive Texts Materials Needed.

The contents of need analysis questionnaire were grouped into five division namely learners' experience, learners' reason, learners' wants and learners' expectation Dudley-Evans and St. John (2009).

Table 1. Students' Experience

No.	Statement	Items	N	F	Percentage (%)
1.	In my experience, reading text in English is	a. Very easy to do	34	0	0%
		b. Easy to do	34	8	24%
		c. Difficult to do	34	14	41%
		d. Very difficult to do	34	12	35%
2.	The difficulties I have faced in reading English texts are due to the unfamiliar learning topics...	a. Strongly Agree	34	9	26%
		b. Agree	34	20	59%
		c. Disagree	34	3	9%
		d. Other	34	2	6%
3.	Another difficulties that i have faced in reading English Text are...	a. The lack of vocabulary	34	12	35%
		b. Determining the, social function and generic structures of the text	34	3	9%
		c. Making inferences and detail informations	34	5	15%
		d. Lack of grammar	34	14	41%
4.	Currently, the level of my ability to read in English language is on...	a. Beginner, very hard to comprehend English texts.	34	19	56%
		b. Intermediate, can comprehend English textsquite well, not fluent yet.	34	15	44%
		c. Advanced, can read and understand English texts fluently.	34	0	0
5.	My main source in learning English is...	a. Textbook	34	26	76
		b. Teacher	34	8	24
		c. Internet	34	0	0
		d. Environment	34	0	0
6.	The existing textbook is in accordance with my study program	a. Strongly agree	34	0	0
		b. Agree	34	0	0
		c. Disagree	34	6	18
		d. Strongly disagree	34	28	82

The data in table 1 above shows that 41% students stated reading text in English was difficult to do, 35% students agreed it was very difficult to do and 24% students felt it was easy to do. For the difficulty, 59% students were agree that reading in English was difficult because unfamilliar topics, 26% students were very agree with that, and 9% students disagree and 6% students had other reasons. For other difficulty, 41% students chose lack of grammar, 35% chose lack of vocabulary, 15% students chose making inferences and detail information and 9% students chose determining the main ideas, social function, and

generic structure. For the proficiency level, 56% students admitted in the beginner level and 44% students admitted in intermediate level. For the role of textbook, 76% students confirmed Textbook was their main source and 24% students confirmed teacher was their main source. For the existing textbook, 82% students strongly disagree that the existing textbook were in accordance with their study program and 18% were disagree.

Table 2. Students' Reason

No.	Statement	Items	N	F	Percentage (%)
7.	As a computer and network engineering student, the reason I study English is...	a. To communicate using English fluently	34	2	6
		b. To understand English vocabulary	34	9	26
		c. To master English vocabularies related to my study program to support my work in the future	34	19	56
		d. To use English to continue my education to university level	34	4	12
8.	I need the kind of learning English reading that can make me...	a. Master new vocabularies related to my study program	34	15	44
		b. Improve my knowledge and critical thinking skills	34	16	47
		c. Understand the text	34	3	9
		d. Find particular information quickly	34	0	0

The data in table 2 shows that 56% students' reason to study English were to master vocabularies related with their major to support their the future, 26% students' reason were to be able to understand vocabulary in their field, 12% students' reason were to be able to communicate fluently, and 6% students' reason were to be able to continue their study. For reading materials, 47% students admitted they needed reading materials that can improve their knowledge and critical thinking skills, 44% students stated they needed reading materials that can help them to master vocabularies related to their major and 9% students stated they need learning English reading that can make them understand the text well.

Table 3. Students' Wants

No.	Statements	Items	N	F	Percentage (%)
9.	Something that I want to do in the process of learning English reading is...	a. Analyzing the meaning and usage of certain vocabulary	34	9	26
		b. Rewriting the contents of the	34	17	50
		c. Taking turns reading the text for pronunciation	34	8	24
		d. Reading the text aloud	34	0	0
10.	The kind of activity in learning grammar that I want is...	a. Arranging the sentences into the correct order	34	7	20
		b. Determining the correct sentence pattern	34	11	32

		c. Identifying and fixing the wrong sentences structures	34	8	24
		d. Making sentences by myself based on the formula	34	8	24
11.	The kind of activity that i want in order to help me improving my vocabulary is...	a. Finding and identifying new vocabularies in a text	34	11	32
		b. Clasifying the meaning of new vocabularies in a table	34	20	59
		c. Completing the chosen sentences and filled with my own knowledge	34	0	0
		d. Finding the meaning of new vocabularies in a text using dictionary	34	3	9
12.	The kind of evaluation that i want in learning reading is...	a. Arranging random sentence	34	8	29
		b. Essays	34	10	24
		c. Complementing sentences	34	7	21
		d. Choosing true/false	34	9	26
13.	I think the existence of pictures in English reading materials are...	a. Very helpful	34	12	35
		b. Quite helpful	34	17	50
		c. Not helpful	34	5	15
		d. Not helpful at all	34	0	0

The data in table 3 above illustrates that 50% students wanted to retell the contents of the text using their own words, 26% students wanted to analyze the meaning and usage of certain vocabulary, and 24% students wanted to take turns reading the text to see pronunciation was. For grammar, there were 32% students wanted to determine the correct sentence pattern, 24% students wanted to identify and fix the wrong sentences structure, 24% students wanted to make sentences by themselves based on the formula and 20% students preffered arranging the sentences into the correct order. For vocabulary, there were 59% students wanted to group the new vocabularies in a table, 32% students wanted to find and identify new vocabularies in a text and 9% students preferred finding new vocabularies in a text using and dictionary. For evaluation, 29% students wanted essay as their learning reading evaluation, 26% students wanted choosing true/false statements, 24% students wanted arranging random sentences and 21% students wanted completing the sentences. For learning with pictures, there were 50% students agreed that pictures were quite helpful, 35% students agreed they were very helpful, and 15% students claimed they were not helpful.

Table 4. Students' Expectations

No.	Statements	Items	N	F	Percentage (%)
14.	I suppose to have the text with the length of...	a. < 250 words	34	11	32
		b. 251 – 350 words	34	23	68
		c. 351 – 450 words	34	0	0
		d. > 450 words	34	0	0
15.	I expect the texts in reading materials related to my study program and they are about...	a. Phenomena related to nature	34	0	0
		b. Procedure of how to cook	34	0	0
		c. Telling the past events	34	0	0
		d. Describing things about computer and network engineering	34	34	100

16.	I hope the English reading materials of descriptive text are related to my study program.	a. Strongly agree	34	19	56
		b. Agree	34	15	44
		c. Disagree	34	0	0
		d. Other	34	0	0
17.	I hope the learning activities involve the usage of technology such as gadget.	a. Strongly agree	34	31	91
		b. Agree	34	0	0
		c. Disagree	34	3	9
		d. Strongly disagree	34	0	0
18.	In the process of learning reading in English language, i hope the tasks will be done.	a. Individually	34	4	12
		b. In pairs	34	10	29
		c. Small group (consist of 3-4 students)	34	13	38
		d. Big group (consist of 5 students or more)	34	7	21

The data in table 4 above show that 68% students wished to learn with text consisting of 251 – 350 words and 32% students wanted text consisting of less than 250 words. For the kind of text, 100% students hoped the kind of text was describing things that related to computer and network engineering. For the reading materials, there were 56% students who were strongly agree that materials should related to their study program and 44% of the students stated that they agree. For the technology involvement, 91% students hoped that technology was involved in learning and 9% did not want technology involved. For the task, there were 38% students preferred the tasks in small group, 29% students preferred the tasks in pairs, 21% students preferred the tasks in big group and 12% students preferred to do the tasks individually.

The analysis of students' needs also done by interviewing the English teacher. She admitted that the textbook she used to teach English did not related with students' study program and sometimes she took additional materials from internet. Moreover, she stated that the reasons why students find it difficult to read the texts in English were because they lack of vocabulary and grammar. The other reason is their textbook was not relevant with their study program. Ultimately, she then agreed that the materials used for vocational school should be specified based on the students' study program since vocational school should implements English for specific purpose.

The Developed English Reading Descriptive Text Material

Based on the result of need analysis and interview with English teacher, the researcher created a course grid based on the basic competencies and steps of scientific approach. Overall, course grid consisted of all the things that would be conducted in the reading descriptive text materials for grade X students of computer and network engineering study program.

After developing the course grid, the next stage was developing the materials. The reading materials consist of three units which are Unit 1. The Museum of Telecommunication TMII, Unit 2. Silicon Valley, and Unit 3. Computer History Museum. The figure below illustrates the parts of each unit of the materials which made by following the steps of scientific approach.

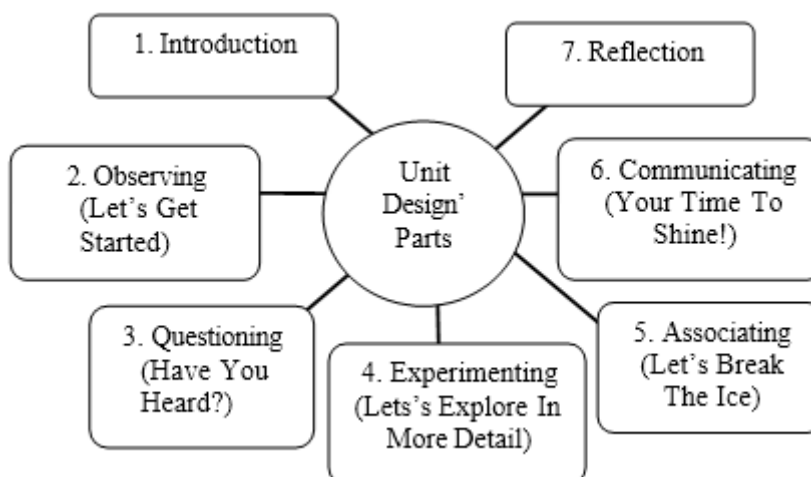


Figure 1. Illustrates the parts of each unit of the materials which made by following the steps of scientific approach

There were seventeen tasks include reflection, grammar review and vocabulary building for each unit. After that, the English reading descriptive text materials were validated by experts. The average is 3.52 from the first expert and 3.65 from the second expert. It shows that the developed materials level of feasibility categorized as “Very Good” and considered appropriate. Therefore, the final product has been produced based on the students’ needs and the steps of scientific approach.

CONCLUSION

Based on the research findings, the English reading descriptive text materials have been developed based on the demands of the basic competency and the needs of the students in computer and network engineering study program. The three descriptive texts that have been developed are “The Museum of Telecommunication TMII”, “Silicon Valley”, and “Computer History Museum”. The research design was adapted from the simplification version of Borg and Gall (1983) theory about Research and Development (R&D) which simplified by Puslitjaknov (2008). The process of developing the materials was started by collecting the data from observation, questionnaire and interview in order to specify the needs and difficulties of students in learning reading descriptive text in English. Then, the materials were arranged by adjusting to the need analysis’ results and steps of scientific approach. After that, the new materials were validated to the experts. From the experts evaluation, it can be concluded that the developed coursebook based on scientific approach was appropriate to be used by the students in grade X of Computer and Network Engineering Study Program at SMKS Harapan Al-Washliyah Sigambal. The final score of the four aspects of the materials showed that the first expert gave 3.52 in total and the second expert gave

3.65 in total which both are in the range $3.25 < \bar{x} \leq 4.00$. It reveals that the developed materials is categorized as appropriate and predicated as “Very Good” according to the level on likert scale.

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