

CHAPTER IV

RESEARCH FINDINGS AND DISCUSSION

In this part, researcher discusses about how media developed before producing final product. The steps are: (1) gathering information and data (2) analyzing the data (3) designing new multimedia-based material (4) validating to experts (5) revision of the product (6) final product.

A. Gathering Information and Data

Gathering information has been done before starting the research. It was supposed to get the problem of the study. There were some information gathered such as the book used, existing material, syllabus, teacher's interview, students' questionnaire. From the information gathered, two problems were found. Firstly, the reading materials in English book were not suitable for their learning needs. Secondly, there should be materials development which fulfilled their needs. Furthermore, the detail information was needed to develop the materials based on students' need. Then questionnaire was distributed to 33 respondents of grade XI students of SMK Shandy Putra Medan, particularly in Multimedia Department and interview session was administered to English teachers. The result will be discussed in the next phase.

B. Analyzing Data

The main data in this study were the existing materials and the students' needs. The existing materials were matched to the students' needs

based on the questionnaire to identify whether the existing materials fitted to the students' needs or not.

1. Existing Materials

The existing materials used by students of Multimedia program in Grade XI were identified by administering the documents, and interview to the English teacher. The students used the English textbook *Bahasa Inggris (Kementerian Pendidikan dan Kebudayaan, 2014) for Grade XI*.

The text used in the text book was not appropriate with the students' need because the text was about *how to make orange juice (see appendix E)*.

2. Need analysis

Need analysis is required before develop the multimedia-based materials. By using need analysis, the researcher determined the students' need by arranging them according to the priorities with reference to the data from questionnaire and observation.

After making the need analysis questionnaire , then the questionnaire was distributed to the students of multimedia programme on December 23th, 2017 in SMK Shandy Putra Medan. The respondents were eleventh grade students of class multimedia 2 consist of 33 students.

After the questionnaires were answered by the students, then the questionnaires were analysed as guidance for developing multimedia-based as

teaching media and material. The results of the need analysis were described below:

a. Questionnaire analysis

1) Target Needs

Target needs are what the learner needs to do in the target situation. The students were identified about what is their needs in reading material and what should be developed from the existing materials. The English teacher was interviewed, and the English teacher found that many students had lack of vocabulary in learning English especially vocabulary about procedure in the office. The students were so difficult to comprehend a text because there are not enough reading materials which were appropriate for classroom use, it made the students rarely to read a text. Then, the text doesn't has the connection to the real world situation of students' environment, means that situation related to the students' major. Target needs were divided into three parts. They are necessities, lacks and wants

a) Necessities

Necessities are defined as the type of needs determined by the demands of the target situation. In this research, the necessities means that the students of the Multimedia program need text of procedure which related to their major and could make the students easy to use English to other in the future, especially in their field of job. The following tables show students' necessities in learning English.

Table 4.1 the students' necessity

Questions	Items	N	F	(%)
I think English for Multimedia program is . . .	a. Very important	33	33	100 %
	b. Important		0	0 %
	c. Less of important		0	0 %
	d. Not important		0	0 %
As the students of Multimedia program, what is the goal in learning English for you ?	a. To get many vocabulary in English related to multimedia	33	13	39.39 %
	b. To understand the instruction manual of the use of multimedia component which use English in working life		15	45.45 %
	c. Able to use English to continue to the higher education		3	9.09 %
	d. To know how to speak English in public well		2	6.06 %

From the data above, 45.45% of students need to learn English to understand the instruction manual of the use of multimedia components which use English because it is very important and support them in working life later. In addition, 100% students believe that the use of texts related to Multimedia in teaching and learning Reading skills is very important.

b) Lack

Table 4.2 the students' lack

Questions	Items	N	F	(%)
The students' opinion	a. Unable to understand and		9	27.27 %

about their limitation in learning English especially in comprehending a text.	structure	33		
	b. Unable to master unfamiliar term and vocabulary in the text.		10	30.50 %
	c. Unable to comprehend the text which is not appropriate with the major.		11	33.3 %
	d. Unable to differentiate text types.		4	12.1 %

Table 4.2 shows In terms of students' limitation in learning English, from the table above 33.33% shows that the students had limitation to comprehend when the text which provided is not appropriate to their major.

c) Wants

Wants is what the learners expect about language are that they want to master. The students of the Multimedia want the language that can make them motivated in learning and mastering English language. The following tables show students' wants in learning English.

Table 4.3 the student's wants

Questions	Items	N	F	(%)
I want topic of teaching and learning Reading that can....	a. Be able to get new vocabulary related to my major	33	13	39.39 %
	b. be able to increase my comprehension about appropriate text that related to my major		15	45.45 %
	c. be able to find specific information quickly		5	15.15 %
	d. I am able to master grammar well		0	0 %

I want English topic for teaching and learning Reading is...	a. topic related to Multimedia	33	33	100%
	b. Computer and network engineering		0	0%
	c. Software engineering		0	0%
	d. Network access engineering		0	0%

From the table above, 45.45% of students want topic related to their major and can increase their comprehension. And 100% of students want the topic related to the multimedia material.

2) Learning needs

Hutchinson and Waters stated that learning needs refer to what the learners need to do to learn. The analysis of learning needs of the students is divided into some points that are input, procedures and setting. Here were the description of the results of needs analysis related to the learners' needs.

a) Input

Input refers to the spoken, written and visual data that learners work with in the course of completing a task. The students' view about the input that should be carried out in the designed text and task is shown in the following tables.

Table 4.4 the input of multimedia-based material

Questions	Items	N	F	(%)
The students' opinion about	a. Enable the students to learn English whenever and wherever		9	27.27%

English learning process that they desired.	they wanted.	33		
	b. Use picture and audio to make it interesting		13	39.39 %
	c. Give a chance to the students to actively participate in every activities		11	33.33 %
	d. Learn autonomously		0	0 %
The students' opinion about the input they preferred in learning English.	a. Pictures that are related to the materials	33	15	45.45 %
	b. Short stories.		13	39.39 %
	c. Articles from newspapers or news		3	9.09 %
	d. Television reports		2	6.06 %
The students' opinion about procedure text they wanted	a. Multimedia	33	31	93.94 %
	b. Computer and network engineering		0	
	c. Software engineering		1	3.03 %
	d. Network access engineering		1	3.03 %

From the table above, the input in terms of English learning process which they desire can be seen that 39.39% of students chose picture and audio to make it interesting. In addition, 45.45% of students preferred the pictures that are related to the materials 93.94% of students want the topic related to the materials.

b) Procedure

Procedures specify what learners will actually do with the input that forms the point of departure for the learning tasks. The procedure that students of the Multimedia want is the procedure that make them to be active in practically language in the class. The following tables show the students' view about the procedures of what they should do with the tasks.

Table 4.5 the procedure of multimedia-based material

Question	Items	N	F	%
The students' opinion about the activities they wanted to in learning English.	a. Reading aloud with the accurate pronunciation	33	10	30.50%
	b. Reading and then answering the questions.		4	12.12 %
	c. Reading and then matching the words with their meaning		13	39.39 %
	d. Answer true or false questions		6	18.18 %

From the result, it can be seen that 39.39% of the students claim that they want the type of the activities in learning English is reading and then matching the words with their meaning.

c) Setting

Setting can be defined as the classroom arrangements specified or implied in the task. It also requires consideration of whether the task is to be carried out wholly or partly outside the classroom. The setting of Multimedia program refer to how the students do the task. The following table shows the students' view about the setting of how the task should be carried out.

Table 4.6 the setting of multimedia-based material

Questions	Items	N	F	(%)
In Reading activity in teaching and learning process,you	a. Individually	33	19	57.58 %
	b. paired consisting of two people		11	33.33 %
	c. group consisting (>3 people)		2	6.06 %

prefer to do the task ...	d. group consisting (>5 people)		1	3.03 %
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From the result, it can be seen that 57.58% of students prefer to do the activity of Reading in teaching and learning proces individually.

b. Interview Analysis

The interview was administered to the English teacher of students of Multimedia study program (Appendix B). It was conducted to support the results of the questionnaire analysis and also to get the accurate data. The teacher's responses to the questions given by the researcher are presented in the table (Appendix B).

By analyzing the data taken both the existing materials and needs analysis including the questionnaire and interview English teacher of Multimedia Program at S MK Shandy Putra Medan it was found that the existing reading materials were not appropriate to the students of Multimedia Program and there was no an interesting learning media that made the students interested and motivating as they were participated in every activity.

Thus, the results of the needs analysis were used by the researcher as guidance in developing appropriate English reading material of procedure text in SMK Shandy Putra Medan for grade XI.

C. Designing New Multimedia-based Material

After getting the data of students' needs,, then multimedia-based materials as teaching media was developed. Here is the steps has done in developing video blog as teaching media.

a) Preparing the content

In developing multimedia-based materials, the researcher needed to prepare the draft of the contents used in the multimedia-based materials. The contents were taken from Wikipedia. Below is the transcript of the procedure text:

“How to Install office 2010”

Materials :

1. Office 2010 disk
2. 1 unit computer or laptop with a CD Drive

Steps :

1. Insert the office 2010 disc into the drive carefully. If the setup wizard does not start automatically, navigate to the disc drive ad click **SETUP.EXE**
2. When prompted, enter the product key.
3. Read and accept the Microsoft software license terms and then click **continue**
4. Follow the prompt and after office install, click **close**
5. In the activation wizard, click **I want to activate the software over the internet**, and follow the prompts

Tips : You need to activate office to keep your office programs filly working. If you do not activate it when you install, you can activate it later from an office application by clicking **FILE > HELP > ACTIVATE PRODUCT KEY**

The researcher chose that topic because it is familiar with multimedia programme as the major of students.

b) Creating the multimedia-based materials

The first step in creating the video was recording process. Recording process was done by using suitable camera in order to get best resolution of the video.

The second step was editing. After recording process, the video was edited by using video editing application. In this case, the researcher used Adobe Premiere Pro CC 2017. Editing process included trimming the video in order to delete unwanted part, change the background of video, input audios recorded, picture and transition into video, and creating opening and closing of video.

c) Finishing

After editing process has finished, the file was rendered or imported into video file format and then burned into CD or DVD.

D. Validating New Multimedia-based Material by Experts

After the first draft of the materials was developed, the multimedia-based materials were evaluated by the experts to know if the content of the material had been appropriate or not. The evaluation was conducted by giving questionnaires to the experts. There were two validators that asked for validating the materials. They were lecture and teacher in their field. The first expert is Indra Hartoyo, S.Pd, M.Hum. He is a lecturer of English Education Study Program of State University of Medan. He evaluated the multimedia-based reading materials, it is about the grammar and the appropriateness of the text related to the Multimedia and the second validator is Rinaldy A. Gultom, S.Pd. He is an English teacher of SMK Shandy Putra Medan. He evaluated the learning multimedia-based material, especially about the vocabulary that

related to the program, activity of the task and the layout of the multimedia-based materials developed.

1. English Lecturer's revision

As suggested by English Lecturer, She recommended to check the grammatical error in the product.

2. English teacher's revision

As suggested by English teacher, he recommended to design the layout more attractive, so it could make the students get more interest.

E. Revising New Multimedia-based Material Based on Experts' Suggestion

The new reading media have been checked by the expert, they are lecturer and English teacher. There are some suggestions and revisions from the experts.

1. The lecturer's Suggestion The lecturer suggested to fix the grammatical error in the materials, in order to make it more quality. For the video, he also suggested to improve the audio quality and synchronize the audio with video.

2. The English Teacher

The English teacher suggested to add the meaning of vocabulary and the picture in each of unit and the transitions of the video.

F. Revised-Developing New Multimedia-based Material (final product)

There are some criterions in developing multimedia-based reading materials and each criteria has score range 1 until 5. Score 1 means bad, score 2 means not enough, score 3 means enough, score 4 means good/relevant and score 5 means very good/very relevant.

The first validation was from English Lecturer who validated the multimedia-based reading materials. There were four criterions which have to be considered whether the reading materials were valid or not, they are linguistic, process, product and content, and layout as stated on validation instrument (Appendix H).

G. Table 4.7 English Lecturer's Validation Score

No.	Criteria	The number of Criteria	Maximum Score	Score
1.	Linguistic	6	30	25
2.	Process	6	30	27
3.	Product and Content	6	30	27
4.	Layout	5	25	24
Total		23	115	103

$$\text{Average} = \frac{103}{23} = 4.4 \text{ or percentage } \frac{103}{115} \times 100\% = 89.56\%$$

The average score of validation from the first validator was 4.4 or 89,56% and it was categorized as relevant. Thus, the final draft or the developed multimedia-based reading materials were valid and appropriate to be used as learning materials for students of Multimedia program in Grade XI.

The second validation was from English teacher to ensure the Multimedia knowledge or information in multimedia-based reading materials were valid (Appendix I).

Table 4.8 English Teacher's Validation Score

No.	Criteria	The number of Criteria	Maximum Score	Score
1.	Linguistic	6	30	28
2.	Process	6	30	28
3.	Product and Content	6	30	28
4.	Layout	5	25	22
	Total	23	115	106

$$\text{Average} = \frac{106}{23} = 4.6 \text{ or percentage} = \frac{106}{115} \times 100\% = 92.17\%$$

The average score of validation was 4.6% or 92,17% and it was categorized as relevant. It means that the materials were valid and appropriate to use for students of Multimedia program in Grade XI..

Finally, final product or developed multimedia-based reading material were valid to use as learning for students of multimedia program in Grade XI at SMK Shandy Putra Medan (Appendix F).