CHAPTER III

METHODOLOGY

This chapter provides the information about research methodology, the participants of the study, time and place of the study, data and data source, instruments of the study, piloting the instruments, data collection procedures, and data analysis procedures.

3.1 Research Method

The methodology used in this study was a survey. In this study, survey technique was the technique conducted to collect the data and analyze the learners' speaking needs. A survey is suitable for assessing needs and evaluating demand (Salant and Dillman, 1994: 2). The aim of survey is to obtain information which can be analyzed and patterns extracted and comparison made. In surveys, all participants are asked the same questions in the same circumstances (Bell, 2005). The writer used survey as the technique to find out what the learners need in speaking and what are the speaking materials given by the teacher. Therefore, what exactly the writer wants to find out is how relevant speaking materials to the speaking needs of computer engineering students specifies that survey is used primarily in this study.

This research was focused on *Teknik Komputer dan Jaringan* major in vocational secondary school. In the preliminary study, there was an issue that standard of competences and basic competences in English in vocational secondary

school were not distinguished based on each major. As the matter of fact, the standard of competences and basic competences need to be distinguished because different majors of vocational secondary school students have different needs which are based on the demand in each target situation. Therefore, the writer wants to find out the relevance of speaking materials to the speaking needs of students majoring in computer engineering. *Teknik Komputer dan Jaringan* students need to be able to interact with other people in English because most engineers work in organizational spheres where team work is essential, and this is impossible without good communication (McMahon and Escribano, 2008). Since the scope is in global tendencies of development of science and technology, computer engineering students are prepared to be programmers, IT and software developer, computer technician, which will meet English in their future work field.

3.2 The participants of the study

The participants of the study were the students of Vocational Secondary School or *Sekolah Menengah Kejuruan* (SMK) majoring in *Teknik Komputer dan Jaringan* from fifteen schools which are located in Jakarta, they are SMKN 22, SMKN 26, SMKN 4, SMKN 36, SMKN 43, SMKN 1 Budi Utomo, SMK Informatika Yasma, SMK Wisata Indonesia, SMK Al-Hidayah, SMK Bakti Idhata, SMK Karya Guna, SMK Walisongo, SMK Cyber Media, SMK-T KAPIN, and SMK Malaka. The schools are chosen from the list of schools which have the *Teknik Komputer dan Jaringan* as one of the programs conducted. From each school, the

writer would take one class whether it is XI or XII grade of *Teknik Komputer dan Jaringan* students as a sample and asked the students to fill the research questionnaire and then a student from each class will be randomly selected to be interviewed. Also, the English teachers of *Teknik Komputer dan Jaringan* class selected were involved to be asked to fill the questionnaire and to be interviewed. Lastly, the practitioners who work in computer and networking field asked to fill the questionnaire and to be interviewed.

3.3 Time and place of the study

The data collection was conducted from January 2015 to May 2015. They were collected from students in Vocational Secondary School or *Sekolah Menengah Kejuruan* (SMK) majoring in *Teknik Komputer dan Jaringan*. There were fifteen vocational secondary schools in Jakarta; SMKN 22, SMKN 26, SMKN 4, SMKN 36, SMKN 43, SMKN 1 Budi Utomo, SMK Informatika Yasma, SMK Wisata Indonesia, SMK Al-Hidayah, SMK Bakti Idhata, SMK Karya Guna, SMK Walisongo, SMK Cyber Media, SMK-T KAPIN, and SMK Malaka. The study was conducted in all vocational secondary schools mentioned above and on the practitioners' workplace.

3.4 Data and Data Source

No.	Questions	Instrument	Data	Data Source
1.	What are English speaking materials given by the teachers to *Teknik Komputer Jaringan* students?	Questionnaire, Interview, Material evaluation	'given' speaking materials	Teachers, students and textbook
2.	What are English speaking materials needed of *Teknik Komputer dan Jaringan* students?	Questionnaire, Interview	'needed' speaking materials	Students and practitioners
3.	How relevant are the speaking materials to the needs of *Teknik Komputer Jaringan* students?	Questionnaire, Interview, Material evaluation	'given' reading materials and 'needed' reading materials	Students, teachers and practitioners

Table 3.4 data, data sources and instruments

3.5 Instruments

The tools to collect and structure data in getting the useful information for the research are research instruments (Hinds, 2000). Three instruments were used in this study: (1) questionnaires (2) interviews (3) observations (4) material evaluation.

3.5.1 Questionnaire

Hinds (2000) states that to collect data from a large of participants, it can be used questionnaire in a research. Questionnaires are also known as written surveys (Salant and Dillman, 1994: 18). The students' and teachers' questionnaire were made

to find out the needs in speaking and to know the speaking materials given in the class. The questionnaires were composed in semi-closed-ended questions that present optional answers and the respondents were asked to choose one of the answers provided but still allow the respondents to write their own answers that may not match to the response categories. It made in *Bahasa* in order to be more understandable by the student. In the questionnaire, the respondents were asked to put on checklist (√) on each statement that they thought it represent theirs.

The questions of questionnaire are arranged based on one of the Hutchinson and Water's (1987) target needs (necessity, lacks, and wants) which is necessity. The necessities are elaborated by focusing on four language skills. The questionnaire is divided into two parts. For the students, the teachers and practitioners, the first part is about learning materials' needs; those are materials of speaking, grammar, and vocabulary. The second part is the activities' needs that they were needed in the process of teaching and learning by using the learning materials in the classroom. In this study, the writer focuses on a specific skill, which is, speaking skills. In the findings of the study, the writer only chooses the suitable points to be discussed that are related to this study. To choose the option of their needed in the questionnaire, the instructions are *"diberikan"* and *"dibutuhkan"*. If the students feel that the materials and the activities provided in the questionnaires have ever been given by the teachers, they can give a checklist in *"Diberikan"* column. If the students feel that the materials and the activities mentioned in the questionnaires are needed by them, they

can give a checklist in *"Dibutuhkan"* column. Below is the example of the questionnaire:

No.	Pernyataan	Diberikan	Dibutuhkan
1	Materi – materi dalam keterampilan **BERBICARA** *(SPEAKING)* adalah:		
	a. Menyetujui atau menolak sesuatu Contoh: *"I agree." "I disagree." "I don't think so."* dll.		

No.	Pernyataan	Diberikan	Dibutuhkan
1	Aktifitas – aktifitas dalam keterampilan **BERBICARA** *(SPEAKING)* adalah:		
	a. Memeragakan percakapan yang ada pada buku teks (*acting from a script*) Contoh: Situasi: Seorang murid memperagakan seorang pelanggan yang menelepon *technical support* (diperankan oleh murid lainnya) untuk meminta bantuannya menginstal *windows* terbaru.		

3.5.2 Interview

The interview is also known as verbal survey that useful when the respondents are unable or unlikely to respond to written surveys (Salant and Dillman, 1994: 40). It was also conducted to get additional supporting data from the questionnaire. The interview is done to confirm the information that the writer got from questionnaire. Interviews were conducted with 15 *Teknik Komputer dan Jaringan* students by choosing randomly from fifteen vocational secondary schools in Jakarta. Also,13 English teachers who teach English for *Teknik Komputer dan Jaringan* students were

interviewed to find out their opinion whether their English is English for specific purposes or General English. A list questions was prepared, regarding such issues as the learning needs of the students, the language skills which the respondents thought need to be developed, and content of the English course. Open-ended questions were used in the interview both for the student and teacher in order to get in depth information related to the materials given and the students' needs. The interviews were delivered in *Bahasa* in order to make the respondents clearly more understand and easier in answering the questions. To make sure of the study, the writer used multiple sources from not only the learners and the teachers but also the domain expert or practitioners (Gilabert, 2005). Therefore, this study also use domain expert that works in *Teknik Komputer dan Jaringan* field as the sources of the research. The writer was interviewed four practitioners that work in *Teknik Komputer dan Jaringan* field. All of the interviews were recorded and then transcribed. They were reported descriptively in order to support the data which were got from the questionnaires. Below are the examples of some questions of the interview questions for the students:

- *Apakah tujuan kamu belajar bahasa Inggris?*

- *Apakah materi bahasa Inggris yang telah diberikan selama ini sudah membantu kamu mencapai tujuan tersebut?*

3.5.3   Observation

To make a consideration as a form of validating other evidences, observation is conducted (Bell, 2005). Observation was conducted in this study in order to

confirm whether what was answered in the questionnaires and interviews matched with the real speaking learning situation or not. Also, it was done to investigate the components when the teachers were teaching speaking. The observations were conducted five times in different five classes from different five schools due to the limitation of time and the permission in those schools. It was conducted in appropriate time when speaking activity was being taught. The data has a role to be supporting data of the study. The purpose of observation is to be analyzed by referring to the following questions mentioned in *Lembar Observasi Kegiatan Pembelajaran.*

LEMBAR OBSERVASI KEGIATAN PEMBELAJARAN

Nama Sekolah   :
Kelas   :
Hari & Tanggal   :

1. Skill apa yang sedang dipraktekkan di dalam kelas?
2. Materi apa yang sedang diberikan oleh guru?
3. Apakah materi tersebut dibuat oleh guru yang sedang mengajar atau mengambil dari sumber lain?
4. Adakah kosa kata atau istilah baru yang sedang dipelajari? Jika iya, apakah kosa kata atau istilah tersebut berhubungan dengan jurusan murid? Sebutkan!
5. Aktifitas apa saja yang sedang diberikan oleh guru dalam menyampaikan materi pelajaran?

3.6 Material Evaluation

The writer evaluated the textbooks which were mostly used in vocational secondary schools being researched in the eleventh grade by using objective analysis.

Objective analysis means evaluating materials used in the classroom and it divided five parts as the bases for conducting the analysis, which are; audience, aims, content, methodology, and other (price and availability) (Hutchinson and Waters: 1987). Each part is focused on different things one and another. Audience deals with the learners, meanwhile aims are focused on the purpose of the course, then content is focused on what materials given to the students, methodology is related to how the learning is conducted, and price and availability are focused on the price needed and the time of the materials can be available and obtained.

3.7 Pilot Study

Before starting the study, the writer was conducted a pilot study first. The writer checked the content validity of the questionnaire by asking the thesis advisor to ensure that all items on questionnaire are valid. The writer tried out the questionnaires to ten of *Teknik Komputer dan Jaringan* students that were chosen randomly. Pilot study was conducted in order to check whether the students have difficulties in filling the questionnaires or not. Also, it was done to check whether the questions provided in questionnaires are effective to be used in gathering the data and answered the research questions. The writer found that nine of ten students could understand and answer the questions properly when the questionnaires were distributed. The writer also tried to interview some *Teknik Komputer dan Jaringan* students. The students had no difficulties in answering the interview questions since it was using *Bahasa*.

Moreover, the interviews results are also used to answers how and why question which those cannot be measured through the questionnaires.

3.8 Data Collection Procedures

There are four instruments in this study to collect the data. The procedures of this study were distinguished into three parts; the first part for data collection of questionnaires (the questionnaire were conducted to the students then to the teachers), the second part for data collections procedures of interviews (the interviews were conducted to the teachers then to the students), data collections procedures of classroom observation and the last part for data collections procedures of material evaluation.

First, the data were collected through distributing questionnaires directly to the *Teknik Komputer dan Jaringan* students in fifteen vocational secondary schools in Jakarta. From each school, the writer took one class from XI or XII grade of *Teknik Komputer dan Jaringan* students as a sample and asked the students to fill the questionnaire. A clear instruction was explained to the participants that required answering all the questions from the questionnaire to avoid misunderstanding that might be happened. Then a student from each class will be randomly selected to be interviewed. Besides the students, the English teachers of *Teknik Komputer dan Jaringan* class selected were also involved to be asked to be interviewed and to fill the questionnaire. Also, four practitioners who work in the *Teknik Komputer dan Jaringan* scope were interviewed and asked to fill the practitioners' questionnaire. All

interviews were recorded using voice recorder. Then, the schools were randomly chosen by the writer to observe teaching and learning activity of speaking skill to get the data of the classroom observations in order to confirm both previous data. Last, for the material evaluation, the first step was the writer investigated what was the main speaking material used in the fifteen vocational secondary schools and it showed that textbook was the main material for English lesson in most vocational secondary schools. Then the writer asked what textbook which was used the most in the vocational secondary schools being researched. The book being used the most by the teachers was the data for material evaluation.

3.9 Data Analysis Procedures

Information about objective needs can be gathered by questionnaires. In data analysis procedures, data which were gained through the questionnaires were calculated by using Microsoft Excel. It presented in form of chart. The procedures of this study were distinguished into three parts; the first part for data collection of questionnaires (the questionnaire were conducted to the students then to the teachers), the second part for data collections procedures of interviews (the interviews were conducted to the teachers then to the students) and the last part for data collections procedures of classroom observation.

A clear instruction was explained to the participants that required answering all the questions from the questionnaire. From the result of the questionnaire, the writer got the answers of speaking needs and speaking materials given by the teachers

from the *Teknik Komputer dan Jaringan* students and their teachers. The result was then compared to the practitioners' answers regarding their English needs and analyzed in order to find out the relevance based on the theories of English for Specific Purposes and English for *Teknik Komputer dan Jaringan*. The writer also analyzed micro and macro skills of speaking as stated by Brown (2004). Then, the writer transcribed and analyzed the data gained from the interviews. It was transcribed in order to support the data gained from questionnaires since interviewing was conducted to confirm that were answered in the questionnaire. After conducting interview, the next step was conducted interviews with the domain expert or practitioners in order to get further ensure the needs of the most urgent of English used in the workplace and then they asked to fill practitioners' questionnaire. The last, the writer analyzed the data that gained from the observations. The video of the observations were analyzed in order to find out how speaking learning was conducted. It referred to *Lembar Observasi Kegiatan Pembelajaran*'s questions.

The writer also evaluated the textbooks which were used the most as the speaking material source in English classes of *Teknik Komputer dan Jaringan* students in the eleventh grade. It has the function to be matched in order to find out the relevance of speaking materials to the speaking needs of *Teknik Komputer dan Jaringan* students. Before analyzing whether the textbook was appropriate for *Teknik Komputer dan Jaringan* students' speaking needs or not, the writer first analyzed the textbook by referring to English basic competences and speaking skill indicators of vocational secondary school for eleventh grade students. After that, the writer used

objective analysis adapted from Hutchinson and Waters (1987) in evaluating the materials used. Hutchinson and Waters (1987) divide five parts as bases for conducting objective analysis which are audience, aims, content, methodology, and other (price and availability). Audience is focused on the learners. Aims are focused on the purpose of the course. Content is what materials given to the students. Methodology is related to how the learning is conducted. Price and availability are related to the price needed and the time of the materials can be available and obtained. After the data had been collected, all data were collected and analyzed.