

CHAPTER II

LITERATURE REVIEW

This chapter describes the theories of ESP, English for engineering, needs analysis, material evaluation, speaking, speaking materials, speaking skills, speaking activities, language components in speaking, *Teknik Komputer dan Jaringan* Vocational Secondary Students' Needs, Graduate Competency Standards, Labor Competency Standards, previous related study, and conceptual framework.

2.1 English for Engineering

In this global era, the demand of English ability in the work field keeps rising each year, either written or spoken. In engineering education, specific English language skills are needed to make engineering students to be successful in academic settings (Tan, 1999; Pendergrass et al., 2001; Sidek et al., 2006; Venkatraman & Prema, 2007). Having knowledge of English is necessary in order to be able to take up work opportunities. Because of the globalization, it is increasingly important to be able to use and to demonstrate it at the level required by companies to compete with international industry. The need for engineering students to be trained in technical writing or speaking is important because of the global tendencies (McMahon and Escribano, 2008). Most engineers work in organizational spheres where team work is necessary, and this is impossible without good communication (McMahon and Escribano, 2008). English communication ability has become a crucial qualification

for a job applicant to be hired in Asian countries where English is not a native language. Engineers all around the world would find themselves use English for some aspects of their jobs (Kim, 2013). English is used in most international organizations and publications in engineering field and most engineers whose native language is not English would find disadvantages in their professional terms (Orr, 2002: pp. 40-44 cited by Kim, 2013). So, nonnative speakers of engineers must master English through continued English education (Orr, 2002). In real world environments, communication skills are critical tools for success, ‘even survival’ (Huckin and Olsen, 1991: 3-10). The survey conducted by Huckin and Olsen found that 4057 responses from working engineers, communication skills rank above any other type of skill including technical writing , public speaking, working with groups, speed reading and talking with people (cited in McMahon and Escribano, 2008). Therefore, English for engineering is important and there is no reason not to learn English.

2.1.1 English for *Teknik Komputer dan Jaringan*

According to *Keputusan Menteri Tenaga Kerja dan Transmigrasi Republik Indonesia Nomor 227 tahun 2003*, Labor Competency Standards are lists of minimal competencies, including knowledge, skills, and attitude, that has to be possessed by people who are working particular job, which valid nationally. These standards are used for guiding teacher while giving materials for students. The standard competencies and basic competence for *Teknik Komputer dan Jaringan* students based on *Peraturan Menteri Pendidikan Nasional Nomor 28 tahun 2009*:

These competencies below divided into 2 sub which are the basis of *Teknik Komputer dan Jaringan* competencies and *Teknik Komputer dan Jaringan* competencies.

A. DASAR KOMPETENSI KEJURUAN

STANDAR KOMPETENSI	KOMPETENSI DASAR
1. Merakit <i>personal computer</i>	1.1.Merencanakan kebutuhan dan spesifikasi 1.2.Melakukan instalasi komponen PC 1.3.Melakukan keselamatan kerja dalam merakit komputer 1.4.Mengatur komponen PC menggunakan <i>software</i> (melalui setup BIOS dan aktivasi komponen sistem operasi). 1.5.Menyambung <i>periferal</i> menggunakan Software 1.6.Memeriksa hasil perakitan PC dan pemasangan <i>periferal</i> .
2. Melakukan instalasi sistem operasi dasar	2.1.Menjelaskan langkah instalasi sistem operasi 2.2.Melaksanakan instalasi <i>software</i> sesuai <i>Installation Manual</i> 2.3.Mengecek hasil instalasi menggunakan <i>software (sampling)</i> 2.4.Melakukan <i>troubleshooting</i> .

B. KOMPETENSI KEJURUAN

STANDAR KOMPETENSI	KOMPETENSI DASAR
1. Menerapkan teknik elektronika analog dan digital dasar	1.2.Menerapkan teori kelistrikan 1.3.Mengenal komponen elektronika 1.4.Menggunakan komponen elektronika 1.5.Menerapkan konsep elektronika digital 1.6.Menerapkan sistem bilangan digital

STANDAR KOMPETENSI	KOMPETENSI DASAR
	1.7.Menerapkan elektronika digital untuk komputer.
2. Menerapkan fungsi peripheral dan instalasi PC	2.1.Mengidentifikasi macam-macam peripheral dan fungsinya 2.2.Menyambung/memasang <i>periferal</i> (secara fisik) dan <i>periferal setup</i> menggunakan <i>software</i> 2.3.Melakukan tindakan korektif.

2.2 English for Specific Purposes

English has been considered as the medium for scientific and scholarly communication in the modern world of technology, it makes learning English has found major priority in academic world (Liaghat and Latif, 2013). In 1980s, English for Specific Purposes (ESP) was divided in ELT became English for Academic Purposes (EAP) and English for Occupational/ Vocational/ Professional Purposes (EOP/ EVP/EPP) due to research studies of register analysis (Barber 1962 reprinted in Swales 1988), discourse analysis, needs analysis (Munby, 1978), and market needs (Ypsilandis and Kantaridou, 2007). English for Specific Purposes (ESP) emerged from “the demands of the new world” which are the development of the world economy, the growth of science and technology, and the global status of English (Dudley-Evans & St John, 1998; Hutchinson & Waters, 1987). English for Specific Purposes (ESP) is defined to meet specific student’s needs (Dudley-Evans, 1997-1998; Robinson, 1980). It focuses on relating the teaching and learning process to

student needs. The students need ESP as for profession, the vocational program, and a professional study (Mackay and Mountford, 1978). “If a group of learner’s needs for a language can be accurately specified, then this specification can be used to determine the content of a language program that will meet these needs.” (Widdowson, 1981). The purpose of ESP refers to the academic needs of students and of future professionals who would seek a career in the academic environment, and the actual needs of future professionals at work (Ypsilandis and Kantaridou, 2007).

Dudley-Evans and St John (1998) modified definition of ESP

1. Absolute characteristics:
 - a. ESP is designed to meet specific needs of the learner;
 - b. ESP makes use of the underlying methodology and activities of the disciplines it serves; and
 - c. ESP is centered on the language (grammar, lexis, and register), skills, discourse and genres appropriate to these activities.
2. Variable characteristics:
 - a. ESP may be related or designed for specific disciplines;
 - b. ESP may use, in specific teaching situations, a different methodology from that of general English;
 - c. ESP is likely to be designed for adult learners, either at a tertiary level institution or
 - d. in a professional work situation; it could be used for learners at secondary school level;

- e. ESP is generally designed for intermediate or advanced learners; and
- f. Most ESP courses assume basic knowledge of the language system, but it can be used with beginners.

Therefore, a number of terms and phrases are very important for ESP. Those are specific needs, language skills, designed for specific disciplines, and designed for adult learners (Hossain, 2013). This is why the applied of ESP approach is needed in English teaching and learning activity in vocational secondary school. It is also believed *that ESP has to be seen as an approach not a product* (Hutchinson and waters, 1987). The teaching and learning activity in vocational secondary school should reflect ESP approach since the teachers need to provide materials that are relevant to each program in Vocational Secondary School instead of general materials that might not relevant with the students' program.

2.3 Need Analysis

Need analysis is considered as a basic principal of English for Specific Purposes (ESP) (Robinson, 1991) and most of the information on need analysis initially came from English for Specific Purposes (ESP) (West, 1994, 1-19). It is also considered to be the main driving factor in ESP curriculum development (Hossain, 2013). Basturkmen (2010) also states that needs analysis in ESP is one of a course development process. Needs analysis has an important role in the process of designing and carrying out any language course, whether it is English for Specific Purposes (ESP) or general English course (Munby, 1978; Hutchinson and Waters,

1987; Dudley-Evans and St. John, 1998; Iwai et al., 1999). Needs analysis is the first step in course design (Johns, 1991; Paltridge, 2013). The purpose of a needs analysis is to identify “what learners will be required to do with the foreign language in the target situation and how learners might best master the target language during the period of training” (West, 1994: p.1-9 cited by Kim, 2013). In the language program design, needs analysis is used for identifying and validating the needs (Richards, 1990). It will help the teacher to meet the language and skills that the learners will use in their target professional or vocational workplace or in their study field (Basturkmen, 2010).

Brown defines needs analysis as “the activities involved in gathering information that will serve as the basis for developing a curriculum that will meet the learning needs of a particular group of learners” (Brown, 1995). It is known as a method of obtaining a description of a learner’s needs or group of learner’s needs (Ellis and Johnson, 1994). Needs analysis collects and analyzes data to determine what learners “want” and “need” to learn (Soriano, 1995). Hutchinson & Waters (1992) define needs analysis on the basis of “necessities” and “wants” in order to classify between what the learners have to know and what the learners feel they need to know. The focus is seen on the “lacks” that represent the gap between the required proficiency in the target situation and the existing proficiency of the learners. The use of need analysis refers to determine whether a program should be applied by finding out if it matches the goals and objectives of the learners for learning a language and used as part of a program that can help in improving various components of the

program and making these more oriented to the needs of the learners. The term needs analysis generally refers to the activities that are involved in collecting information that will serve as the basis to develop a curriculum that will meet the needs of a particular group of students (Iwai et al, 1999).

Hutchinson and Waters (1987) divide needs into target needs and learning needs. The target need refers to what the learner needs to do in the target situation and the learning need refers to what the learner needs to do in order to learn (Hutchinson and Waters, 1987: p.54; Jordan, 1994). The target need categorize into (1) necessities; what the learner has to know in order to function effectively in the target situation, (2) lacks; the difference between necessity and what the learner already knows, (3) wants; what the learner actually wants to learn or what they feel they need. The learner's "wants" may or may not match those perceived by the teachers or course designers (Hutchinson and Waters, 1987: pp.55-57). To design specific English materials in vocational high school, the teacher should analyze the students' needs first because the materials should be based on the analysis of students' needs (Hutchinson and Waters, 1987). Furthermore, Hutchinson and Waters (1987) divide two needs to be analyzed in needs analyses, which are, target needs and learning needs. First, target needs are about the questions about knowledge and abilities of the learners that they will require to be able to perform in target situation (Hutchinson and Waters, 1987 as cited by Tahir, 2011). The target situation divided in three terms, which are, necessities, lacks and wants. In necessities, the analysis of needs is located on the demands in target situation, while in lacks, the analysis of needs is based on

what the students have known to decide which of the necessities the student lacks (Hutchinson and Waters, 1987). The second needs are learning needs. The learning needs are what the students need to do in order to learn (Hutchinson and Waters, 1987). Both of target needs and learning needs are the part of needs analysis which is linked to each other. Richards (2001) explains that there are several ways to get information about students' needs; like interviews, distributing questionnaires, meetings, observation, collecting learner language samples, task analysis, case studies, and analysis of available information. Richards (2001) stated needs analysis as the procedure to gather information about learners' needs. It can be concluded that need analysis is a process for identifying what the students need to be learnt and what they want to learn in order to specify the content of English course related to their work field.

2.4 Material Evaluation

Evaluation means as a matter of judging the suitability for a particular purpose (Hutchinson and Waters, 1987). The teaching materials needed by the students have to be chosen by the teachers as their responsibility and evaluating materials should be done since a book might be or might not be suitable for a number of students. Evaluation is a matching process: matching needs to the available solutions (Hutchinson and Waters, 1987). In addition, an ESP textbook had to suit the needs of a number of parties-teachers, students, and sponsors. Material Evaluation divided into two ways which are subjective analysis and subjective analysis.

Subjective analysis is meant to be used to meet the needs of the course. It is the analysis of the course which requires the materials for particular students while objective analysis which is meant to be used to evaluate the materials used in the course. Both should be done together in order to know what should be taught and what should be given (Hutchinson and Waters, 1987).

2.5 Speaking

Speaking is the productive oral skill including of producing systematic verbal utterances to deliver meaning (Nunan: 2003). Richards and Renandya (2002: 204) explains that the ability to use the language suitably in social interactions that involves not only verbal communication but also paralinguistic elements of speech such as pitch, stress, and intonation is required in having a successful oral communication. In addition, nonlinguistic elements such as gestures, body language, and expressions are also needed in delivering messages directly without any accompanying speech (Brown, 2007: 237). According to Nunan (1989: 32) oral communication can be succeed if it involves: (a) the ability to articulate phonological features of the language comprehensibly, (b) Mastery of stress, rhythm, intonation patterns, (c) An acceptable degree of fluency, (d) Transactional and interpersonal skills, (e) Skills in taking short and long speaking turns, (f) Skills in the management of interaction, (g) Skills in negotiating meaning, (h) Conversational listening skills (successful conversations require good listeners as well as good speakers), (i) Skills

in knowing about and negotiating purposes for conversations and (j) Using appropriate conversational formulae and fillers.

Second-language or foreign-language learners require mastering speaking skills in English (Richards, 2008). Harmer (1979) explains that speaking is important to be taught because of three reasons of why a teacher encourages his learners to do speaking task, those are; rehearsal, feedback, and engagement. Rehearsal refers to expose the learners the real kind of similar speaking activities which might happen outside the classroom. Then, feedback is believed would give some advantages for the teacher and learner. For the teacher, the advantages are the teacher would understand of how well his class is doing and what problems the learners might have and for the learners, they would find that the task is easy and know what things they need to do to develop their ability in speaking. The last is engagement, it would make the idea that the learners who fully participate in the classroom is good for speaking activities as the teacher has set up its activities properly which makes the learners satisfy.

Moreover, the teacher can use the bottom-up-top-down approach to speaking. The bottom-up approach to speaking refers to the learners start with the smallest units of language, i.e. individual sounds, and move through the mastery of words and sentences to discourse. The top-down approach to speaking indicates that the learners start with the larger chunks of language, which are set in meaningful contexts, and use their knowledge of the contexts to understand and use the smaller language elements appropriately (Nunan, 1989: 32).

2.5.1 Speaking Material

Comprehending the different functions of speaking performs in daily communication and the different purposes for which the students need speaking skills are essential in designing speaking activities or instructional materials for second or foreign-language teaching (Richards, 2008). Brown and Yule (1983) made the difference between the interactional functions of speaking, which serves to establish and maintain social relations, and the transactional functions, which focus on the exchange of information (Richards, 2008). There are three-part version of Brown and Yule's framework of functions of speaking (after Jones, 1996, and Burns, 1998): talk as interaction; talk as transaction; and talk as performance. Each of these speech activities is different in terms of form and function and also needs different teaching approaches. First, talk as interaction refers to what we normally know by "conversation" and explains interaction that serves a primarily social function such as when people meet and they exchange greetings, engage in small talk, recount recent experiences, and so on. Second, talk as transaction proposes to situations where the focus is on what is said or done. The focus is located in making oneself understood clearly and accurately, rather than the participants and how they interact socially with each other. "For example, students may be engaged in hands-on activities (e.g., in a science lesson) to explore concepts associated with floating and sinking. In this type of spoken language students and teachers usually focus on meaning or on talking their way to understanding." (Jones, 1996:14 cited in Richards, 2008). The last is talk as performance. It refers to talk that can useful be respected. For example a public

talk, that is, talk that transfers information before an audience, such as classroom presentations, public announcements, and speeches.

Furthermore, Shumin (cited in Richard and Renandya: 2002) suggested that the materials of English interactive activities for a variety of communicative purposes should (1) be based on authentic source materials; (2) enable learners to operate and practice specific features of language; (3) allow learners to rehearse, in class, communicative skills they need in the real world; and (4) activate psycholinguistic processes of learning. Therefore, it is expected that the materials used in the classroom is authentic, which is made based on or real life situation. So, the activities given in the classroom that already gave the students much rehearsal to do, they would be able to communicate in real life. Also, Shumin (2002) explains that there are four types of sources that used in order to make interactive materials. Those sources are aural materials, visual materials, material-aided, and culture awareness. Aural materials are news reports on the radio, taped dialogues, and taped short passages that can be used in some productive activities as background or as input for interaction. Then, Visual materials like appropriate films, videotapes, that be used to give the learners discovery to see and hear the language from the native speakers of English directly. Lastly, Material-aided such as appropriate reading materials given by the teacher with structured comprehension questions could that produce a creativeness from the learners because they can do storytelling, presenting the reports, and speech.

2.5.2 Speaking Skill

Brown (2001: 271) states micro skills are very important in teaching oral communication. It involves the importance of focusing on both the forms of language and the functions of the language. The pieces of language should be given attention for more that make up to the whole (Brown, 2001). According to Brown (2004: 142-143), there are twelve micro skills of oral production: (1) Produce chunks of language of different lengths, (2) Orally produces differences among the English phonemes and allophonic variants, (3) Produce English patterns, words in stressed and unstressed positions rhythmic structure, and into national contours, (4) Produce reduced forms if words and phrases, (5) Use an adequate number of lexical units (words) in order to accomplish pragmatic purpose, (6) Produce fluent speech at different rates of delivery, (7) Monitor your own oral production and use various strategic devices pauses, fillers, self-corrections, backtracking- to enhance the clarity of the message, (8) Use grammatical word classes (nouns, verbs, etc), system (e.g. tense, agreement, and pluralization), word order, patterns, rules, and elliptical forms, (9) Produce speech in natural constituent in appropriate phrases, pause groups, breath groups, and sentences, (10) Express a particular meaning in different grammatical forms and (11) Use cohesive devices in spoken discourse. Five macro skills of oral production: (12) Accomplish appropriately communicative functions according to the situation, participants and goals, (13) Use appropriate registers, implicative, pragmatic conventions, and other sociolinguistics features in face to face conversations, (14) Convey links and connections between events and communicate such relations as

main idea, supporting idea, new information, given information, generalization, and exemplification, (15) Use facial features, kinetics, body languages, and other non verbal cues along with verbal language to convey meanings and (16) Develop and use a battery of speaking strategies such as emphasizing key words, rephrasing, providing a context for interpreting the meaning of words, appealing for help, and accurately assessing how well interlocutor is understanding you.

From micro- and macro skills above, it can be concluded that speaking skill is always related to communication. It also can be stated as the skill to use the language accurately to express meanings in order to transfer or to get knowledge and information from other people in the whole life situation.

Brown (2004: 144-182) also classified five speaking skill areas. Those speaking skill areas are as follow: (a) Imitative speaking, which focuses on pronunciation and drilling is used by the teacher in the teaching learning process in order to make students get opportunity to listen and to orally repeat some words. (b) Intensive speaking, it refers to students' speaking performance that uses some phonological and grammatical aspects of language and reading aloud is the example of the task. (c) Responsive speaking, it can be limited level of very short conversation, standard greeting and small talk, simple request and comments for example a short replies to teacher or student-initiated questions or comments, teacher's giving instructions and directions. (d) Interactive speaking, transactional (dialogue) which is performed for the purpose of delivering or exchanging specific information. (e) Interpersonal (dialogue), which are interview, role play, discussions,

conversations and games. The last is (f) Extensive (monologue), it refers to when teacher gives students extended monologues in the form of oral reports, summaries, storytelling, and short speeches.

Based on the theory above, it can be concluded that in speaking, the students need to know the pronunciation, vocabularies, and language functions that they are going to use. They can use the language properly if the students are ready and prepared for the activity.

2.6 Language Components in Speaking

2.6.1 Grammar

Grammar is the way words are put together in order to make a correct sentence (Ur, 1996). Grammar refers to the system of rules ordering the conventional arrangement and relationship of words in a sentence (Brown, 2000). It includes into the word and also the components of its like prefixes, suffixes, roots, verbs, noun endings, etc. Therefore, it is seen that grammar is the systems that consist of rules that order the word and its components to make arrangement of its correct sentence. Grammar teaching occurs as the result of other work that the students are doing (Harmer, 2008). For examples, in reading lesson in which students deal with a text that is read by them, grammar problem presents unexpectedly, and teachers think that they should involve grammar explanation at that point. It shows that it is so common that grammar lesson is included into four skills of English lesson.

There are many activities used to practice grammar. There are seven grammar practice activities by Ur (1996) that teachers could use in teaching grammar. They are awareness, controlled drills, meaningful drills, guided and meaningful practice, structure-based free sentence composition, structure-based discourse composition, and free discourse. Controlled drill is the drill where the learners are expected to make examples that are predetermined by teacher or textbook. They should make it in very clear and conform to closed-ended cues. Meaningful drill involves learners in making responses that are very controlled with limited choice. Such as, in simple present tense practice, learners are asked to find someone they know well and make true statements about them as in the examples given. Guided and meaningful practice is the type of practice which needs learners to make sentences of their own with free vocabularies they choose. Structure-based free sentence composition is the activity where the learners are given with a visual or situational cue, and expected to make their own responses. Through this technique, the students are directed to use the structure. It is can be done with a picture given to the learners then they describe it with the correct tense. While structure-based discourse composition technique is when the learners are asked to make a passage which uses some examples of the structure they learnt before. Lastly, free discourse is quite similar to the structure-based discourse composition, but students are freely to put the structure in their composition. They are just asked to make a passage and this task is given after the lesson about a structure itself. Thus, the teacher is expected that the learners would put the structure into their passage automatically.

2.6.2 Vocabulary

Vocabulary is the words that teachers teach in the foreign language (Ur, 1996). It is also known that a new item of vocabulary may be more than a single word such as post office and mother-in-law, which are made up of two or three words but shows a single idea. If someone knows a word has the meaning, it is assumed that when someone knows a word, he is supposed to know the meaning of the word, the written form of the word, the spoken form of the word, the grammatical behavior of the word, the collocation of the word, the register of the word, the associations of the word, and the frequency of the word. If those things are mastered by a person then it is said that he already knows the word.

There are ten techniques by Ur (1996) of presenting the meaning of new vocabularies, they are; concise definition as in dictionary – often a super ordinate with qualification, detailed description of appearance, qualities, etc., examples or hyponym, illustration in pictures or objects, demonstration such as acting and mime, context of a story or sentence in which the item occurs, synonyms, antonyms, translation, and associated ideas or collocation.

The best way of introducing new words to students is through letting them to see the words in context of how those words are used (Harmer, 2008). It is explained further that teachers should let their students to read texts and see those words in action. Consequently, reading to a text, they would also be asked to match the words found in the text with the synonym or antonym, to find the meaning of the word so, they will know what that word means in the context of that text, and also teacher should

ask the students to say the word correctly. It can be seen, showing the new words or vocabularies to students is happened in the middle of lesson of the four English skills' lesson.

2.7 Teknik Komputer dan Jaringan Vocational Secondary Students' Needs

The needs of learning English of Computer Engineering Vocational Secondary Students are based on graduate competency standards (*Standar Kompetensi Lulusan*) and labor competency standards (*Standar Kompetensi Kerja Nasional Indonesia*).

2.7.1 Graduate Competency Standards (Standar Kompetensi Kelulusan)

Graduate competencies standards are guidance to assess and decide whether a student could graduate from the school or not (<http://bsnp-indonesia.org>). These standards consist of minimal graduate competency standards for basic and secondary education, minimal graduate competency standards for groups of subject, and minimal graduate competency standards for every subject.

The minimal graduate competency standards for Vocational Secondary Education that integrated with the use of English are as follow:

18. Berkomunikasi lisan dan tulisan secara efektif dan santun

22. Menunjukkan keterampilan menyimak, membaca, menulis, dan berbicara dalam bahasa Indonesia dan Inggris

English subject is divided to Science and Technology group. The minimal graduate competency standards of Science and Technology group for Vocational Secondary School that integrated with the use of English are as follow:

8. Berkomunikasi dan berinteraksi secara efektif dan santun melalui berbagai cara termasuk pemanfaatan teknologi informasi

10. Menunjukkan keterampilan menyimak, membaca, menulis, dan berbicara dalam bahasa Indonesia dan Inggris

For more specific standards of minimal graduate competency for speaking skill of English subject are provided in this table:

Skills	Novice Level	Elementary Level	Intermediate Level
Speaking	Utter an idea interpersonally and/or transitionally in formal and/or informal situation in daily life	Utter an idea interpersonally and/or transitionally in formal and/or informal situation deal in with their job	Utter an idea interpersonally and/or transitionally in formal and/or informal situation relate to their professions

2.7.2 Labor Competency Standards (*Standar Kompetensi Kerja Nasional Indonesia*)

Keputusan Direktur Jenderal Manajemen Pendidikan Dasar dan Menengah Nomor: 251/C/kep/mn/2008 explained that *Teknik Komputer dan Jaringan* is a sub major of engineering which related with information and communication technology major. According to Ministry of Manpower and Transmigration Decree (*Keputusan*

Menteri Tenaga Kerja dan Transmigrasi) Republik Indonesia Nomor 227 tahun 2003, Labor Competency Standards are lists of minimal competences, including knowledge, skills, and attitude, that has to be possessed by people who are working particular job, which valid nationally. These standards are essential to guide teachers in giving materials for students since the purpose of Vocational Secondary Education is supposed to prepare students for employment. These labor competency standards that are used by Computer Engineering Programs are standards for computer network and administration system, and computer technical support.

Keputusan Menteri Tenaga Kerja dan Transmigrasi Republik Indonesia Nomor: KEP.269 /MEN/ VII /2006 about Standard National Competencies of Computer and Administration System as follow:

1. General competencies (*Kompetensi Umum*)

1	TIK.JK01.001.01	Being able to communicate in the work place <i>(Melakukan komunikasi ditempat kerja)</i>
2	TIK.JK01.002.01	Being able to work individually in the field of IT <i>(Melaksanakan pekerjaan secara individu dalam lingkungan organisasi TI)</i>
3	TIK.JK01.003.01	Being able to work in team <i>(Melaksanakan pekerjaan secara tim)</i>

2. Main Competencies

1	TIK.JK02.001.01	Being able to design local area network (LAN) <i>(Membuat desain jaringan lokal)</i>
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2	TIK.JK02.002.01	Being able to design wide area network (WAN) <i>(Membuat desain jaringan berbasis luas)</i>
3	TIK.JK02.003.01	Being able to design servers' needs <i>(Mendesain kebutuhan server)</i>

3. Selected Competencies - Network Development Area

1	TIK.JK03.001.01	Being able to make programme code for networking <i>(Membuat kode program untuk keperluan jaringan)</i>
2	TIK.JK03.002.01	Being able to decide specification of network device <i>(Menentukan spesifikasi perangkat jaringan)</i>
3	TIK.JK03.003.01	Being able to make an offer of the network devices to vendor <i>(Membuat penawaran pengadaan perangkat kepada vendor)</i>

4. Selected Competencies - Network Implementation Area

1	TIK.JK04.001.01	Being able to implement the system components <i>(Mengimplementasikan komponen-komponen sistem)</i>
2	TIK.JK04.002.01	Being able to install and operate the network servers <i>(Menginstall dan Mengelola jaringan multi server)</i>

5. Selected Competencies – Network Maintenance Area

1	TIK.JK05.001.01	Being able to decide the maintenance strategy <i>(Menentukan strategi perawatan)</i>
2	TIK.JK05.002.01	Being able to do the maintenance procedures <i>(Melaksanakan prosedur perawatan)</i>
3	TIK.JK05.003.01	Being able to determine and resolve problems on client computing <i>(Menentukan dan menyelesaikan masalah komputasi pada klien)</i>

4	TIK.JK05.006.01	Being able to give instructions or advice of network problems (<i>Memberi petunjuk atau saran permasalahan jaringan</i>)
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Those competencies above divided into 5 subs which are general competencies, main competencies and three selected competencies based on computer field.

2.8 Previous Related Study

There are some previous studies of English for Specific Purposes (ESP) that had been conducted in English Department of *Universitas Negeri Jakarta*. The study of Dewita (2013) is also in *Teknik Komputer dan Jaringan* major. She found the materials given by the teachers are General English and the textbook which was used by the teachers as the learning materials didn't provide the language used in engineering contexts that only fulfilled the needs of the students for dealing with national examination but could not fulfill students' needs for communicating in their future workplace. Also, the study of Dewita (2013), and Hartanti (2013) investigated the relevance of materials in the textbook used by teachers to *SMK* students' needs. The result revealed is similar that the material given by teachers from textbook are too general since the textbook is used for any major in Vocational Secondary School. The textbook might support the students' needs for National examination but not for their related field of their future workplace.

The last study of English for Specific Purposes (ESP) had also been done by Azhar (2014) which involves multimedia Vocational Secondary School students. The

result of the study showed productive skills, namely speaking and writing were needed most by both participants. They are both crucial skills that need to be mastered in order to survive in multimedia industry. Therefore, English competencies were constructed for multimedia vocational school should refer to these productive skills.

2.9 Conceptual Framework

Computer engineering program in Vocational Secondary Schools provided English subject for preparing students in mastering the competences that are required to compete and survive in their future workplace. *Teknik Komputer dan Jaringan* students need to master specific language that is related to their work field since the rising demand of using English in the certain industry. Therefore, they need to learn English which differs from English in other majors. Needs analysis need to be conducted in designing materials in order to determine the matched English material that given to the students. It should be done in order to meet the students' needs of learning English since it can give a reflection of what the students have to do in the target situation (Hutchinson and Waters, 1987)

In finding the students' needs, the writer conducted the need analysis by Hutchinson and Waters (1987) that consists of necessities, lacks, and wants. Also, Hutchinson and Waters (1987) suggested that the thing that appropriate for the students in vocational secondary school is the teaching and learning process which relevant to the students' target needs. The writer also tried to investigate the speaking

materials used in *Teknik Komputer dan Jaringan* and analyzed if they are relevant with the student needs. Further, the writer limited the needs of *Teknik Komputer dan Jaringan* students into speaking skill and the materials into speaking materials. That is 40 % of the sample were examined, English for vocational secondary school which the writer studied shows that the materials should be based on the student's needs in their future work place including skills, vocabulary, and grammar.