AN ANALYSIS OF STUDENTS' NEEDS OF ENGLISH FOR ENGINEERING AT TENTH GRADE STUDENT OFSMK N 1 BETARA

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Abstract

This research is to analyze the learner's needs of English for Specific Purpose (ESP) at SMK N 1 Betara especially in engineering program because English is important for students. In English for Specific Purpose (ESP), English is taught to meet the English needs in area of specialization. The needs in area of specialization are worth considering since the language we speak and write varies from one context to another. The purpose of this researcher wants to examine the learner's needs of English for Specific Purpose (ESP). This research applied a mixed-method. The combination of both quantitative and qualitative research targeted students of SMK N 1 Betara in engineering program especially in tenth grade with 31 participants. The result of this research in students' English language course preferences 41,9 % want to learn English accordance with the material they need in engineering. In students' results regarding the language aspects of the English language course, more than half of students (61,3 %) want to learn English more specific, it means they wanted English lesson associated with their department of engineering that can be useful as in the job.

Keywords: **English for Specific Purposes, Engineering Students, Need.**

Introduction

In era of globalization and information, the Indonesian nations in demand are able to compete with other nations in various fields of life. In that era, the mastery of science becomes a necessity because it will determine the ability of a nation to win the competition. In addition, individuals from various countries will compete to dominate employment or business areas with conditions where English is needed in education and employment aspects. In this case, English becomes one of the most important subjects of language education for students in Indonesia. Therefore, before learning, keep in mind that the material studied already in accordance with the students' needs. To achieve effectiveness and alignment between the needs and the ability of students, it is necessary to

research on the needs of students in learning English in college. In order for student to accept something that is taught gladly would have to be known beforehand needs which similar with the usual teaching. Thus, the material prepared and taught will be studied with great interest and concern by learners.

In English for Specific Purpose (ESP), English is taught to meet the English needs in area of specialization. The needs in area of specialization are worth considering since the language we speak and write varies from one context to another (Hutchinson and Waters, 1987). Further, if a group of learners' English language needs can be accurately specified, it will be easy to determine the content of a language program that will meet these needs.

Suyadi (2016: p.144) states that English needs a specific method of teaching and learning it in order to make it more useful for the learners and not wasting time of teaching it to the students. To make it more useful, of course, the teachers of English need to consider the basic needs of the students in learning the English at their classroom. Specific English materials should be used for a specific study program of the students. In other words, every study program should have its own specification of English materials.

Students' needs of English in specific discipline can be analyzed through Needs Analysis (Richard, 2001). Needs analysis is used to develop objectives and content, and it can provide data for reviewing an existing program (Richards in Nunan, 1988). According to Iwai et al. (1999) cited in Songhori (2008), the term needs analysis generally refers to the activities that are involved in collecting information that will serve as the basis for developing a curriculum that will meet the needs of a particular group of students. Moreover, Sprat (2005) said

> *To meet students' personal needs, teacher should choose suitable materials, topic, speed of lesson, activities, approach to teaching (activity-based, topic-based), treatment of individual learners, skills, interaction patterns (group, pair or individual), and types of feedback. Meanwhile, in order for teacher to meet students' learning needs, they should choose suitable materials and topic, activities, interaction pattern, approach to teaching, language and skills level of language and skills, learning strategies and workload.*

It means identifying students' needs are crucial to design an English for Specific Purpose (ESP) course in terms of deciding suitable materials and teaching method. Students' needs analysis is often described as the first step that the curriculum or course planners should do to determine the students' skills, competences, knowledge, needs and purposes in learning. This step helps the curriculum planners or learning provider knows whether the content of the courses is relevant with the students' needs or not.

Needs itself, are often described in terms of a linguistic deficiency, that is, as describing the difference between what the learners can presently do in a language and what the learners should be able to do. What are identified as needs depends on a judgment and reflects the interest and values of those making such a judgment. Teachers, learners, employers, parents, and other stakeholders may thus have different views as to what needs are. Conelly and Clandinin (1988) define a stakeholder as a person or people with a right to comment on, and have input into, the curriculum process offered in schools. Different stakeholders may want different things from the curriculum. In addition, Brindley (1984) says, "The term need is not as straightforward as it might appear, and hence the term is sometimes used to refer to wants, desires, demands, expectation, motivations, lacks, constraints, and requirements".

To investigate the English for Specific Purpose (ESP) learners needs, our study is based on Hutchinson & Waters (1987) target needs approach to Nedd Analysis (NA). According to their views target needs is defined, as an umbrella term that includes three distinctions: necessities, lacks, and wants.

SMK N 1 Betara is a kind of school in P. Lumut that has many departments such as weld, engineering, and accountant. Some students tell if they need specific materials in learning English because they have difficult when their practical work. The problem is their materials in learning are not appropriate with their lesson for example in engineering program.

Based on the fact above, the researcher takes much interest in conducting the research dealing with English for Specific Purpose (ESP), especially on the learners needs. Here the researcher wants to examine the learner's needs of English for Specific Purpose (ESP) at SMK N 1 Betara especially in engineering program because English is important for SMK N 1 Betara students since many technical engineering books are written in English and they are ready for their practical job that required English mastery. Paying attention to that explanation above, the researcher conducts a research entitled: An Analysis of Students' Needs of English for Tenth Grade Student of Engineering at SMK N 1 Betara Academic Year 2017/2018.

There are many problems in students' need analysis for English for Specific Purpose (ESP) in SMK Negeri 1 Betara, for example their needs in English for Specific Purpose (ESP). Needs itself, are often described in terms of a linguistic deficiency, that is, as describing the difference between what the learners can presently do in a language and what the learners should be able to do. In response to the conditions above, the researcher tries to know the students' need of English for Engineering for the students in SMK Negeri 1 Betara.

Theories of ESP

Hutchinson and Waters (1987) define English for Specific Purposes (ESP) as an approach to language teaching in which all decision as to content and method are based on the learners' reasons for learning. In other words, the content and the method in English for Specific Purpose (ESP) should be based on the learners' needs. The background of English for Specific Purpose (ESP) is based on the following reasons:

a. The demand of brave new world

After the Second World War, the development of economic, science, and technical activities in the world are growing fast. The effect from the development of those three fields is that people are learning English not only for prestige, but also because English is the key of those three fields. As English become the international language, it creates a new generation of learners who know specifically why they are learning language.

b. A revolution in linguistics

The teaching and learning process of English in English for Specific Purpose (ESP) should be based on specific groups of learners. If a language varies from one language to another, it should be possible to determine the features of the specific situations and then make the features the basis of the learners' course. In other words, the English needed by a particular group of learners could be identified by analyzing the linguistics characteristics of their specialist area of work or study.

c. Focus on the learner

In English for Specific Purpose (ESP), learners are seen to have different needs and interests, which would have an important influence on their motivation to learn and on their effectiveness of learning. Here, the courses that are relevance to the learners' needs would improve the learners' motivation and make learning better and faster. From the explanation above, the development of English for Specific Purpose (ESP) is influenced by the development in economic, science, and technical fields, which creates the learners who know specifically why they are learning English. The content and the method for English for Specific Purpose (ESP) should be based on the learners' needs in order to improve the learners' motivation and make them learn language better.

Needs Analysis on ESP

Before conducting a course design, needs analysis is needed in English for

Specific Purpose (ESP) in order to specify why the learners need to learn English. There are two kinds of needs in English for Specific Purpose (ESP), according to Hutchinson and Waters (1987):

1. Target needs

Target needs belong to what the learners need to do in the target situation. In analyzing the target needs, there are three considerations which should be considered namely necessities, lacks, and wants.

a. Necessities:

This term belongs to what the learners have to know in order to function effectively in the target situation. Learners will also need to know the linguistics features – discourse, functional, structural, and lexical – which are commonly used in the situations identified.

b. Lacks

This term belongs to the gap between the target proficiency and the existing proficiency. Whether or not the learners need the instruction will depend on how well they can do it already.

c. Wants

This term belongs to what the learners' need from English for Specific Purpose (ESP) course. Here, before starts designing English for Specific Purpose (ESP) course, teachers and material developers have to know what are needed by the learners from joining English for Specific Purpose (ESP) course.

2. Learning needs

Learning needs are the knowledge and abilities that learners will require in order to be able to perform to the required degree of competence in the target situation. The information about learning needs may be recorded in the form of language items, skills, strategies, or subject knowledge

which is needed by English for Specific Purpose (ESP) course designers.

English for Engineering

Ibbotson (2008) state, English for Engineering is to improve your professional communication skills, whether you are an engineer, an engineering technician or a technical manager. Another opinion from Site Institute, "English for Engineering provides engaging activities to improve your reading, listening, writing and speaking while preparing you for the Engineering industry. The course is structured at different levels of proficiency and our program integrates the skills you need to improve you English and Engineering vocabulary fast.

So English for Engineering is provides the students of Engineering to improve your communication skill and your abilities in reading, listening, writing and speaking to preparing the students for the Engineering industry.

Theories of Needs Analysis

It is possible to come across with different definitions of needs and needs analysis in literature. According to Hutchinson and Waters (1987) the history of English for Specific Purpose (ESP) indicates that Munby is the first specialist who enounces "a highly detailed set of procedures for discovering target situation need," in 1978 in his noteworthy contribution entitled "Communicative Syllabus Design". "Communication Needs Processor" or CNP is first most thorough and widely known model on needs analysis. For Hutchinson and Waters:

"TheCommunication Needs Processor (CNP) consists of a range of questions about key communication variables(topic, participants, medium, etc.) which can be used to identify the target

language needs of any group of learners"

Initially, needs were classified by Hutchinson and Waters (1987) into target needs (i.e. what the learner needs to do in the target situation) and leaning needs (i.e. what the learner needs to do in order to learn). Target needs were made up of necessities, lacks and wants and learning needs were used by Hutchinson and Waters as general term comprising all factors that influenced language learning such as attitude and motivation. Hutchinson and Waters (1987) argue that the needs, potential and constraints of the learning situation must be taken into account if the process of needs analysis was going to be useful.

In fact, needs analysis was introduced into language teaching through the ESP movement; it is and always will be an important and fundamental part of ESP (Gatehouse, 2001); and it is the corner stone of English for Specific Purpose (ESP) and leads to a much focused course (Dudley-Evan & St. John, 1998). Needs analysis has been acknowledged by several scholars and authors (e.g. Hutchinson and Waters, 1987; West, 1994; Dudley-Evans and St. John, 1998; Iwai et al. 1999).

Generally the term needs analysis refers to the activities that are conducted and involved in collecting information that will serve as the basis for developing a curriculum that meets a particular group of students' needs (Iwai et al., 1999). There is a plethora of research that has been carried out internationally in Need Analysis (NA). In Algeria, for example, studies were conducted to investigate English language needs of English for Specific Purpose (ESP) students (e.g. Ounis 2005, Dakhmouche, 2008).

Accordingly, literature reveals that Need Analysis (NA) is essential so as to investigate the needs of a particular group of learners through different data collection instruments from different sources. The outcomes of such studies direct to useful judgments regarding the development of basic curricular elements. As well, all these studies confirmed the importance of identifying learners' needs and showed the dangers of ignoring Need Analysis (NA) in designing English for Specific Purpose (ESP) courses.

Components of ESP Needs Analysis

Different components of language needs analysis are employed to investigate different focuses and issues in language planning, development, teaching and learning. Many English for Specific Purpose (ESP) scholars suggest that TSA (Target Situation Analysis), LSA (Learning Situation Analysis), PSA (Present Situation Analysis) are the fundamental components for assessing language needs of learners.

A. Target Situation Analysis (TSA)
Many English for Specific Purpose (ESP) scholars propose that Target Situation Analysis (TSA) is the fundamental approach for analyzing language needs of learners. In fact, all the different components to language needs analysis attempt to meet the needs of the learners in the process of learning a second language and are employed to examine different focuses and issues in language planning, development, teaching and learning. It is possible to say that the theoretical aspect of the needs analysis is based on Target Situation Analysis (TSA) component. Therefore, it is necessary to review the literature concerning the Target Situation Analysis (TSA).

Mumby's model of needs analysis (1978, as cited in Hutchinson and Waters, 1987) clearly established the place of needs as central to ESP. As Hutchinson and Waters (1987) say:

"With the development of the CNP it seemed as if ESP had come of age. The machinery for identifying the needs of any group of learners had been provided: all the course designers had to do was to operate It."

In fact, Chambers in his 1980 article first used the term Target Situation Analysis (TSA) in which he attempted to elucidate the confusion of terminology. For Chambers Target Situation Analysis (TSA) is "communication in the target situation.".Target Situation Analysis (TSA) is a component of needs analysis, which focuses on identifying the learners' language needs in the occupational or academic situation they are being prepared for (West, 1994). In the same vein, Hutchinson and Waters (1987) define target needs as what the learner needs to do in the target situation. These were made up of necessities, lacks, and wants and what the learner needs to do in order to learn are his learning needs.

If target situation analysis tries to establish what the learners are likely to be at the end of the language course, several terms have also been introduced to Need Analysis (NA): Present Situation Analysis, Pedagogic Needs Analysis, Deficiency Analysis, Strategy Analysis or Learning Needs Analysis, Means Analysis, Register analysis, Discourse analysis, and Genre Analysis. Thus, all these different approaches to needs analysis tried to meet the needs of the learners in the process of learning a second language.

B. Learning Situation Analysis (LSA)

Learning Situation Analysis (LSA) refers to subjective, felt and process-oriented needs (Dudley-Evans and St. John, 1998). Learning Situation Analysis (LSA) also directs what learners want to learn. Dudley-Evans and St. John state that Learning Situation Analysis (LSA) means effective ways of learning the skills and language. According to them, Learning Situation Analysis (LSA) also refers to why do learners want to learn. They elucidate that subjective and felt needs are derived from insiders and correspond to cognitive and affective factors. Therefore, 'to feel confident' is a subjective/felt need (Dudley-Evans and St. John, 1998). They also explain that process-oriented needs originate from the learning situation.

C. Present Situation Analysis (PSA)

Robinson (1991) delineates that PSA (Present Situation Analysis) seeks to ascertain what the students are akin to at the start of their language course, looking into their strengths and weaknesses. Dudley-Evans & St. John (1998) state that Present Situation Analysis (PSA) estimates strengths and weaknesses in language, skills and learning experiences. Richterich and Chancerel (1980) formulate the most extensive range of devices for establishing the Present Situation Analysis (PSA). They suggest that there are three basic sources of information: the students themselves, the language-teaching establishment, and the 'user-institution', for example the students' place of work. For each of these, English for Specific Purpose (ESP) practitioner seeks information regarding their respective levels of ability; their resources; and their views on language teaching and learning. They also recommend that English for Specific Purpose (ESP) practitioners might also study the surrounding society and culture: the attitude held towards English language and towards the learning and use of a foreign language (Richterich and Chancerel, 1980). Munby (1978) argues that Present Situation Analysis (PSA) represents constraints on the Target Situation Analysis (TSA). According to McDonough (1984), Present Situation Analysis (PSA) involves 'fundamental variables', which must clearly be considered before the Target Situation Analysis (TSA). In practice, one is likely to seek and find information relating to both TSA and PSA simultaneously. Thus,

needs analysis may be seen as a combination of Target Situation Analysis (TSA) and Present Situation Analysis (PSA).

Research Methodology

In analyzing the data, this research combining quantitative and qualitative methods. Quantitative method was applied to analyze data to calculate the frequencies and percentages, the use qualitative method to draw hypothesis from the result. As Brown (2001) suggest using the combination of qualitative and quantitative method whenever possible as they might provide more comprehensive findings.

Using descriptive qualitative method explains the problem solving. Creswell (2012) perceives "A qualitative research study is needed to explore this phenomenon from the perspective of distance education students". This research is not only sample colleting the data, but covers data analysis, and interpretation to the research problem can also be concluded also not qualitative not only search data but also data can be problem solving the research.

This research was designed as a descriptive qualitative research because this study investigated the Engineering students' purposes in learning English and their opinions toward learning process in the classroom. Hence, the results were reported descriptively as suggestions to English teachers of SMK Negeri 1 Betara in designing specific materials for the Engineering students. The research will be focused on tenth grade students of Engineering Program. The reason of the researcher choose this School because, firstly it is easy to get the data for the research, secondly understand the location and situation. So in the result researcher can know as far as the requirement of the Engineering students in learning English.

The research was conducted in SMK Negeri 1 Betara at Engineering Program. Focus on tenth grade students of Engineering in SMK Negeri 1 Betara. This research involves the researcher and the students of engineering program in SMK Negeri 1 Betara. In this research, Engineering students of SMK Negeri 1 Betara were chosen as the subjects of the study. Those students are tenth graders. There are about 34 students. Those students were chosen as the subjects of the study because the English teacher and also the researcher consider that those students are active and they are considered that they can represent all the Engineering students of SMK Negeri 1 Betara.

Findings
Perceptions of Students

Perceptions of students are divided into two main sub-sections: the students' English language needs and their preferences for the English language course.

Background Information

This section intended to collect personal information from the students. According to the first item, it is noticeable that all 31 respondents are not males, but have two female students.

Analysis of the Questions

Question 2: Do you consider English important for your studies?

VALID	NUMBER	PERCENT
YES	31	100%
NO	0	0%
TOTAL	31	100%

Table (1): Important of English

Table (1) indicates that 100% of respondents have answered "Yes" while 0% has answered "No". Since a large proportion of tenth grade students have answered "Yes", one can say that English is very important for their studies and their motivation remains higher. This question has been devised in order to know the importance of English for this kind of learners. In the Table (1) the researcher

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can conclude if the students knew they need to learn English. Based on the sample of 31 students, all of sample agrees if learning English is important for them.

Question3: How would you describe your attitude towards English language learning at the beginning of your studies?

VALID	NUMBER	PERCENT
Favorable	27	87.1%
Unfavorable	4	12.9%
TOTAL	31	100%

Table (2): Students' Attitude towards English Learning

According to the results recorded on Table (2), 87.1% of the respondents expressed a favorable attitude towards English learning while 12.9% have not. Based on table (2) the result indicated if learning English for students is favorable in the beginning of studies. It showed that the students' interest is high when learning English, so we stay see where they are interest. A student's previous learning of English may influence the attitude to an ESP course (Kennedy and Bolitho, ibid, p.16). This question was asked to get an appreciation of the students' attitude.

The students' perceptions regarding English language needs

Question 4: What sub skill would you most like to use now?

English Language Skills		N	Mean
Reading Sub-Skill	Reading textbooks and course handouts	31	2.2581
	Reading technical articles in journals	31	2.8065
	Reading technical manuals	31	1.9677
	Reading study notes and texts on computer	31	2.6129
Writing Sub-Skill	Writing short projects and assignments	31	2.2258
	Taking notes in lectures	31	1.0000
	Writing exam answer	31	1.5484
	Writing text	31	1.3548
Listening Sub-Skill	Following lectures	31	1.0968
	Following	31	1.9355

	question/answer sessions in class		
	Listening to spoken presentations	31	1.6452
	Listening to instructions and explanations	31	1.1935
Speaking Sub-Skill	Participating in discussions	31	1.6774
	Asking questions in class	31	1.8710
	Giving spoken presentations	31	2.4194
	Others (please specify)	31	2.0645

Table (3): Students' Frequency of English Language Skill Use

Depending on the results recorded on Table (4.3), regarding reading sub-skills, the results indicated that the students like to use reading skill, it shown with the magnitude of the average students who choose this sub-skill compared to other sub-skill with an average more than 2 in three sub-skill especially in Reading technical articles in journals the mean (2.8065). For the writing sub-skills, the results showed that the average is very low. This can be seen from taking notes in lectures have been viewed by the students to be the least frequent used sub-skills with mean (1.0000).

Discussions

Based on the analysis of the questionnaires, we attempt to discuss the findings of the students' perceptions. After the analysis form Table (1) indicates that 100% of respondents have answered "Yes" while 0% has answered "No". Researcher can concluded that English is very important for their studies and their motivation remains higher, and the results recorded on Table (2), 87.1% of the respondents expressed a favorable attitude towards English learning while 12.9% have not. A student's previous learning of English may influence the attitude to an ESP course (Kennedy and Bolitho, ibid, p.16).

The Students' English Language Needs

The discussion of the results was based on Hutchinson & Waters (1987) target needs, regarding the students' necessities, lacks and wants. It is noticeable that English is very important for students in their field of studies; also they have expressed a favorable attitude towards English learning at the beginning of their studies.

First of all, the results which were shown on Table (3) represent the Engineering students' English language necessities. The results present the English language skills that students would most like to learn, which are reading technical articles in journals, reading study notes and texts on computer, giving spoken presentations, reading textbooks and course handouts, and writing short projects and assignments. These are what the students have to know in order to function effectively in the target situation. In Table (4) the most important basic skills in learning English they need to learn is writing skills with 61.3% students choice very important to learn, and the Speaking (58.1%) and Reading (54.8%) in average level they want to learn. And the last is Listening skills, the students while choice this basic skill is not very important just 45.2% from the other so that can concluded if the students think if listening skill is not very important to learn.

Secondly, regarding the engineering students' English language lacks, the findings on Table (3) reveal that they are unable to practice effectively the four skills needed to master the language. They rated themselves in listening, reading, and speaking skills being as at the average level. On the other hand, they described themselves to be weak in writing skill, we can indicate from writing sub skills "taking notes in lecture just have (mean:1.0000) In view of that, Robinson (1989: p.402) writes "An important consideration is the degree of proficiency expected in the target situation."

Finally, in terms of the English language' wants, Engineering students on Table (5) indicate they want more training to develop their performance in the English language. Based on table (5) Speaking and Listening sub-skills have high average students' wants of language sub skills they want to a lot of training.

A correlation can be drawn with the self-ratings of their ability in performing the English language skills. In terms of needs of the skills, the students have concentrated much more efforts on and developed a confidence in, speaking and listening rather than reading and writing. One can justify this difference by the fact that there has been much demand on these skills.

The Students' Perceptions of the English Language Course

The attitudes and expectations of the learners and the specifications of the official curriculum will determine and transcribe the effectiveness of a language program (Nunan, 1989: p.176). On the basis of the results shown in Table (6), we notice that 0% of the students responded negatively to the usefulness of the English language course. Whereas (54.8%) and (45.2%) have answered that the course is "Of some use" and "Useful" respectively.

In view of that, almost the Engineering students in our study revealed that the current English language course is not based on predetermined objectives and they would like to take General purposes English (GE) type of English course.

Moreover, the results in percentages on Table (9) below refer to choices indicated by the respondents. Table (9) can be read on the principle of the highest percentage summed up for the individual answers. It is noticed that the majority of the students gave priority to

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General Vocabulary 83.9%; 74.2% for speaking skills; 67.7% for reading comprehension; 64.5% for communicative skills; 61.3% for specific grammar; 48.4% for listening comprehension: 35.5 for writing skills and finally, 32.3% for technical vocabulary. So, researcher can concluded if the student still gave priority to General Vocabulary but some students also want to be focused in Technical Vocabulary. Researcher also fined if the students want to be focused in speaking skill, it can see 74.2 % students' choice it. The results of the study may be an aid to the further development of ESP program basing on the English language needs of students and improvement of the current program to better meet the needs of the students at the Engineering Program at SMK N 1 Betara.

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