

THE NEEDS ANALYSIS OF ENGLISH MATERIAL ON CHEMICAL INDUSTRY STUDENTS

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ABSTRACT

This research aims to find out the students need at chemical industry major at SMKN 2 Bojonegoro. This is classified as mixed method research design. It used two kinds of instruments namely questionnaire and interview guidelines. The questionnaire aims to gain and collect information from students especially their need related to English teaching and learning. While, interview guideline is used to gather information from English teacher at SMKN 2 Bojonegoro. The result shows that there are some skills and language components that students need at chemical industry major such as; listening, speaking, vocabulary, and grammar. Based on the data obtained from questionnaire, most of students say that listening and speaking are two important skills and needed at chemical industry major. While at school, the ESP approach is not applied yet, as a result, it influences on choosing materials. It can be concluded that in designing materials, the teachers and curriculum maker should do needs analysis and analyze what actually students need and work need.

Keywords: *Needs analysis, ESP, Vocational High School*

A. INTRODUCTION

English is one of well-known languages in the world. Most of people use English as compulsory language. Even, it is an International language. It is used in official and international occasion. It can be used in any fields such as trade, economy, and science, industry and so

on. The importance of English in daily communication influences its position in education. As a result, English become one of compulsory subjects in school. It is learned from elementary school till university level.

Regarding the importance of English in education side, teaching and learning English is not an easy job for teacher

and students especially in Non-speaking English countries. Especially teachers, they should prepare everything such as method of teaching, materials, and media and so on. One of influential components in teaching and learning English is materials. Material is crucial part in teaching and learning English. Appropriate material will lead successful teaching and learning English well. That is why preparing and choosing appropriate material are not as easy job. Teachers should identify and know deeply what actually students need in learning English. It is related to the goal of learning. Effective material will lead effective English learning. Selecting and choosing appropriate material should be related and in line with the goal of learning. It should be relevant with the aim of teaching and learning and it will lead and discover students' ability.

Vocational High school or *Sekolah Menengah Kejuruan* is a level of education which aims to develop students' competency and ability in specific or certain field of work. It means students are prepared to be professional and skilful students and worker. In vocational high school, English also plays important role in developing students' skill in their major. English is also one of compulsory subjects that is taught in vocational high school. As the globalization era, most of works need skilful and compatible employer. That is why vocational schools need to prepare their students to be skilful and compatible. Talking about teaching and learning English in vocational school,

English is taught to give students the communicative use of English needed for their future job field (Kurikulum Tingkat satuan Pendidikan, 2006). Regarding the importance and use of English, students' need should be in line with the goal of teaching and learning English. It means, materials should be related with students' need in their specific major. It will help them to understand the material and they will easily apply it. Of course, it will be great job for teachers, stakeholders and curriculum designer or planner to design appropriate curriculum, syllabus and materials. They should consider students' need and market needs in future job filled.

Dealing with the explanation above, in fact, many teachers found difficulties in designing, choosing and selecting appropriate material for vocational students especially in teaching and learning English. It can be detected from teacher's explanation in interview. It did on May 5th, 2018. The teacher said that some materials that she taught is not related to the students' major. In short, most of materials are not appropriate yet related to the students' major in vocational high school. It can be seen from the book or materials that they used. There is no difference between chemical industry students and non-chemical industry students. Automatically, it can result a gap between what actually students need in their program and what they get at school.

Furthermore, the differences will influence students' language proficiency. It means what students got

from their learning might mismatch with what future job needs. Of course, it will make dissatisfy the stakeholders who are going to hire them after they graduate later. It is risky for students to compete with others. Regarding to the problem, teachers ideally can select, choose and find out appropriate material and match with what students need with their future work. For instance, a teacher that teaches English in chemical industry program can provide students with text and vocabulary related to chemical industry, the process of chemical and how industry processes the chemical materials and so on. It literally helps students in getting and understanding the material that match with their need and program.

Based on the explanation above, it can be said that there is a gap between what actually students need and they get during learning process. Related to the problem, needs analysis is really important to be conducted to analyse what actually students need in learning English in vocational high school.

Dealing with needs analysis, there are many experts explain about the concept of needs analysis. Evans and St John (2008) explain that needs analysis refers to corner stone of ESP and leads to every focused course. It can be understood that needs analysis is a process to collect and gather the data what actually students need in teaching and learning process. It aims to gather information as much as possible related to what students need and what their field of work need. In other word, it is a kind of process to make similar line between what students need and what

materials that really need to be taught. Needs analysis is a kind of starting point to analyse and identify what students need. The aim of doing needs analysis is to find out and analyse what materials are appropriate with students need and work need.

Regarding to the explanation above, it can be connected to the problems in vocational high school especially in Chemical Industry students at SMKN 2 Bojonegoro. Needs analysis is urgently needed to be conducted. Therefore, the research about the needs analysis of English material on Chemical Industry students is very potential to be conducted. The aim of this research is to find out and analyse what students' needs in some aspects such as lacks, wants and necessity related to English teaching material.

B. REVIEW OF LITERATURE

The Concept of English for Specific Purpose (ESP)

Many experts define and explain about the concept of English for specific purpose (ESP). Richards and Schmidt in Cunningham (2015:3) explain that ESP is the role of English in a language course of instruction in which to the content and aims of the course are fixed by the specific needs of particular group of learners. It means that ESP deals with how students' need are in line with the content and aims of the course especially in language teaching. In other word, ESP is closely related to the particular learners with their specific needs.

Robinson as cited by Dudley Evans and St John (2008) explains that ESP can be defined based on two key criteria. The main key of criteria is ESP is normally goal directed. It can be understood that the orientation focuses on particular and specific needs. He also adds that ESP courses develop from a needs analysis which aims to specify as closely as possible what exactly it is that students have to do through the medium of English.

Streven in Dudley Evans and St. John (2008) explains that there are some characteristics of ESP namely absolute characteristics and two variables characteristics. Dealing with absolute characteristics, Strevens' explains that ESP consists of English Language Teaching which is designed to meet specific needs, related in content to particular disciplines, occupations and activities, and in contrast with general English. While, ESP also still has variables characteristics namely ESP may be restricted as to the learning skills to be learned, ESP may not be taught according to any pre-ordained methodology. Based on the explanation from Streven above, it can be understood that ESP is special. It means that it concerns on particular needs that really connected to the specific contents, disciplines. Students learn particular skills based on what they need related to their job or concerns.

In addition, Widdowson as quoted by Rostami and Zafarghandi (2014:1) declares ESP that if a group of learners' need for a language can be accurately specified, then the specification can be used to determine the content of

language program that will meet these needs. It can be understood that ESP concerns on specific language program that aims to meet what students need with their goal related to specific disciplines or occupation. There is relationship between needs and aims related to teaching language.

Regarding to the explanations above, in short, ESP is a kind of approach that focuses on students' need. The needs will be related to particular or specific disciplines or occupation. It also aims to improve communication and skills in learning language that closely related to specific occupation, disciplines, or works and etc. ESP also deals with language need to particular skills and disciplines.

The Concept of Needs Analysis

Talking about ESP, absolutely it deals and closely related to needs analysis. It is a starting point to analyze and to identify what actually learners need in learning language. A lot of experts have point of view about needs analysis.

Richards et al as summarized by Rostami and Zafarghani (2014:3) explain that needs analysis is required means of conducting research before outlining, and determining lessons, materials, curriculum, and it aims to draw a profile of learners in order to decide or prioritize the needs for which learners necessitate English. It can be understood that needs analysis is a systematic process to gain and identify and analyze what students need in learning English. It also deals with priority and goal of learning. In other word, students' need is a priority in

designing teaching materials, curriculum, and so on.

Ellis and Johnson as cited by Qasemi (2015:2) explain that needs analysis is a way of getting comprehensive information of learners' need of cluster of learners need. Shortly, it can be simplified that needs analysis is a kind of way to collect and gather information especially for particular need or fields. By conducting needs analysis, curriculum makers and stakeholders can identify, analyze and classify what actually students need in learning language. So, they can design and choose appropriate materials related to students' need and what skills that really important and they need in learning language.

Dudley Evans and Maggie Jo St John (2008) explain that needs analysis deals with concept of collecting, identifying and analyzing professional information about the learners such as activities and task of learners, it also gains and collects professional information about factors in learning, language skills, and so on. In shorts, they state that needs analysis commonly covers some aspects namely lacks, wants and necessities in teaching and learning. So, needs analysis is process to gather and collect information related to learners need. It also identifies what students' capacity and need to acquire and learn particular skills related to their goal and needs.

In summary, needs analysis is systematic way to collect and gain professional information related to the learners' particular needs. By conducting needs analysis, it will get valuable information related to some

aspects such as wants, lack and necessities. Those information are really important as a basic information to design and choose appropriate skills that the learners need, materials, curriculum and specific activities that will be used in teaching and learning process. It also deals with English teaching and learning process. In other word, needs analysis investigates English language needs of particular or specific disciplines. It aims to make connection what the learners get and its uses in specific or particular field of work.

C. METHOD

Research Design

This research used mixed method research design both qualitative and quantitative. Students' need related to their learning and teaching English in particular disciplines and English skills in the content area of courses. To collect the quantitative the data, the researcher used questionnaire and it was distributed to the students. While interview was done to get qualitative data and it was done by interviewing the English teachers.

Research Setting and Participant

This research was carried out at SMK 2 (Vocational High School) Bojonegoro especially at Chemical Industry major. The students consist of 34 students. Then after collecting the data from students, the researcher conducted an interview with the English teacher at that school.

Research Procedure

There were some procedures in collecting the data followed by the researcher such as:

1. Designing the instruments of the research namely questionnaire and interview guidelines. In this research, the researchers used questionnaire to obtain information about students' needs. While, interview guidelines were used to gather information from English teachers and an expert. In designing both questionnaire and interview guidelines, the researchers focused on three aspects namely necessity, lacks and wants. After designing the instruments, the researchers validate them before distributing to the sample.
2. Distributing the questionnaire to the students to get the data especially students' needs and it consists of 3 components like necessity, lacks and wants.
3. Conducting an interview with the English teacher to get the data.
4. Analyzing the data both from qualitative and quantitative data.
5. Research finding was elaborated
6. Writing a report of the research.

D. FINDINGS AND DISCUSSION

Based on the analysis of questionnaire the data can be presented as follow:

Table 1. The data and frequency of Students. the Necessity

Skills	Very important		Important		Less Important		Not important	
	F	%	F	%	F	%	F	%
All skills in English	15	44%	18	53%	0	0	1	3%
Listening	10	29%	22	65%	1	3%	1	3%
Speaking	20	59%	12	35%	1	3%	1	3%
Reading	17	50%	16	47%	0	0	1	3%
Writing	15	44%	16	47%	3	9%	0	0
Grammar	18	53%	13	38%	2	6%	1	3%
Vocabulary	18	53%	13	38%	3	9%	0	0

Based on the data above, it can be simplified that all the skills in English are important and necessary to be learned by the students of chemical industry. While, 29% students say that listening is very important for them in teaching and learning English at their major. 65% students say that listening is important and 3 % students say that listening is less important and just 3% students say that listening is not

important. It can be concluded that chemical industry students commonly say that listening is necessary for them in learning English.

Dealing with speaking, dominantly students say that speaking is very important. It can be seen on the table above, 59% students say that speaking is very important and necessary in chemical industry major. 50% students agree that reading is very important

skill for them at chemical industry major. 47% students say that reading is important skill for them. In short, reading is really necessary for chemical students to be learned. It means they need to learn reading a lot during teaching and learning process.

Dealing with writing, 47% students say that writing is important for them. Only 9% students say that writing is less important for them. It seems that chemical industry students need writing. Comparing with the other skills, the highest percentage of students' necessity is speaking skill. It means that students argue that speaking is very important to be learned at their major. While listening is also got the highest percentage. Students say that listening is important skill in chemical industry major.

Dealing with grammar and vocabulary, chemical students have various answer. 53% students say that grammar is very important skill that need to be learned. While vocabulary, 53% students say

that very important. It can be simplified that vocabulary and grammar are very important for them in learning English at chemical industry major. Especially vocabulary, students really need to know certain and special vocabulary related to their major. They need to understand specific and particular vocabulary related to their major (chemical industry).

In summary, students' needs are really crucial in ESP because of the essential of ESP itself. It means that certain skills become the priority in teaching and learning English at the class. Students need certain skill based on their major and disciplines at their major. It also related to their future work. Particular company commonly apply qualified or requirements such as being able to use English both spoken and written. It means that in applying job, students have to have certain capability in communication and using English. It will be useful for them later on.

Table 2. The Distribution data of Students Needs analysis

Statement	Strongly agree		Agree		Less agree		Disagree	
	F	%	F	%	F	%	F	%
Learning English related to the major	10	29	13	38	10	29	1	3
Sufficient and appropriate learning time	12	35	15	44	7	21	0	0
Using authentic materials and dictionary	12	35	16	47	5	15	1	3
Teaching vocabulary and grammar support English skills related to the major	11	32	13	38	4	12	1	3
Focus on mastering specific skills that are needed by students and in accordance with work in the future	16	47	11	32	6	18	1	3

Based on the data above, it can be seen that generally the students of chemical industry have specific needs related to

English materials that they want to study. Based on the table above, 29% students strongly agree with teaching

and learning English are related with their major. 38% students agree with that statement. While, 29 % students less agree about it. 3% students disagree with learning English related to specific major. It can be said that students generally agree with learning English based on what they need and closely related to their major (Chemical Industry).

Dealing with material, 35% students strongly agree with the use of authentic material and dictionary. It means that in teaching and learning English, authentic materials are needed to support their learning activity. 47% students agree with the use of authentic materials. Only 15% students less agree with it and 3% students disagree. It can be said that in choosing material, teacher should consider the effectiveness of materials in learning activity. Students will be interesting with authentic materials and they will be easy to catch the idea.

Dealing with the time allocation in teaching and learning English, 35% students strongly agree with sufficient time to learn English. 44% students agree with appropriate and enough time to learn English. 21% students less agree with it. It can be said that enough and appropriate time allocation in learning English is considered to be students' want. It means they want have more time to deeply learn and understand English. In other word, in choosing materials, teacher should consider the effectiveness time and material.

Related to specific vocabulary and its relationship with specific disciplines,

32% students strongly agree with teaching specific vocabulary based on specific discipline. 38% students agree with it. 12% students less agree and 3% students disagree. It can be said that students want to get and learn specific vocabulary related to their major. For example, chemical industry students need to know, learn and understand specific terms and vocabulary related to chemistry and industry. Of course, it will be useful and effective for students. Automatically, it will be easy for students to improve their skills in English. It will improve their competency.

Regarding to specific skill that students need, 47% students strongly agree that teaching and learning English focus on certain skills that they really need at their major. While, 32% students agree with it. 18% students less agree with it and only 3% students disagree with it. It can be understood that students want to learn and focus on specific skills that really needed at chemical industry.

Based on the description above, it can be understood that students have specific needs and wants related to learning English especially in material. In chemical industry, teacher ideally can give authentic materials and choose specific and special vocabulary related to chemistry and industry. Students need to learn specific English skills to improve their proficiency and skill. Chemical industry students ideally need to have special skills and competency related to their major. It will influence their competency and proficiency in the future.

Comparing with the data above, interview had been done to get information from the English teachers at vocational high school. The interview aims to get information related the true condition teaching and learning process especially in teaching English at vocational high school. There are some questions are asked to the teachers:

The questions are closely related to ESP and Needs analysis of English at vocational high school. Based on the teacher explanation and answer in interview, it can be summarized that actually English is truly important for vocational high school students because they are prepared to be skilful and ready employee at certain company. It means students are prepared to be skilful and capable in their particular major. Dealing with the skills that students commonly need, the teacher express that speaking is the most important one in vocational high school. Then the second one is listening, reading and writing. Dealing with grammar and vocabulary, the teacher also say that both of them are necessary in learning English at vocational high school. The teacher also explain that teaching and learning English at vocational high school is not totally based on ESP approach. She argues that all skills are important to be learned. She adds that no need to specified skills in certain major. She also talks about the influence of changing curriculum influences English teaching and learning. Automatically, time of learning English is not enough. It just get 3 hours in a week. It is really limited time.

Dealing with materials, the teacher used some sources such as from internet eBook, and other sources. But commonly the teacher chose certain vocabulary and materials related to their major. Take an example, for engineering students, the teacher looked for certain vocabulary related to the machine for teaching and learning.

In short, based on the whole interview transcript, it can be summarized that teaching and learning English at vocational high school is not closely based on ESP approach. The teacher did not conduct the needs analysis before starting learning. It means she just identified students' ability through daily learning activities without paying attention to what actually students' and field work needs in the future. Of course it was fatal one because it can influence the students' ability in English. Of course, it will effects on the materials that students need at their major.

E. CONCLUSION

Based on the explanation above, it can be concluded that needs analysis is a starting point to identify students' need especially in learning English. There are some specific skills that chemical industry students need in learning English. Speaking and listening are skills that chemical industry students need in learning English. In other word, chemical industry students need to prioritize those skills. They can focus to improve those skills. It does mean that they ignore other skills. They just need to focus and prioritize those skills. Chemical industry students also need to

learn reading and writing. While grammar and vocabulary are important components. Dealing with vocabulary, chemical industry students need to learn specified vocabulary that related to their major. Based on students' need, teacher can choose learning materials related to their specific need and major. It will make students easy to learn and it will help chemical industry students to be skilful, communicative and compatible at their own major.

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