

DEVELOPING ENGLISH LEARNING DESIGN BASED ON ESP FOR MECHANICAL ENGINEERING CLASSROOM

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Abstract: English is one of the important and vital factor in one career. It needs good handling preparations for getting good process and result of mechanical engineering classroom, while the developing is in bounds. The product of learning design that is in accordance with the students' needs analysis systematically expect to create more effective, efficient, easier, and right on target learning. It is called with ESP (English for Specific Purpose) that uses realistic contexts of daily life of learners' needs. It prepares mechanical engineering learners through concord learning materials in vocational high school that will be adjusted to the competencies and abilities based on the 2016/ 2017 revision curriculum 2013, which began to be realized in the 2017/ 2018. Realia English learning design will contributes not only for students but also for teacher in developing suitable English modules in preparing them to be a ready Engineers earlier.

Keywords: Mechanical engineering learners in Vocational High School, Need analysis, English for Specific Purpose, English learning design based on curriculum.

INTRODUCTION

In the implementation of teaching and learning process, not many teachers have mature preparation when they are going to teach, supported by unpreparedness of students to obtain English language learning which they think drains more thinking than others, so English is considered a subject that is not easy for most students to learn. In the newest curriculum (2013 Curriculum revised), the English syllabus used must be self-developed by the teacher including the content of the material to be taught, so that no official learning designs and textbooks are set by the government. However, the establishment of learning designs and official English textbooks by the government are sometimes different from the needs of students in each region. Especially for vocational students, the development of the material used is less embracing them to be able to understand English in accordance with the vocational competencies they choose. Of course this also requires great support from educational institutions which will be one form of bargaining position to keep the existence of educational institutions as a means of learning English in printing superior generations of language.

Therefore, this study departs from the observation of the lack of potential of vocational students in mastering English during this time compared to high school students, even though English is one of their supporting career and education careers. Then, is the English language material taught always the same even though students are studying different vocational competencies? Of course, not all of them should be the same, because the approach, material, and terms used should be adjusted to their skill competencies. The approach as described above is known as ESP or English for Specific Purpose. ESP according to Dudley-Evans (2010) is intended

to meet the specific needs of students, centering on language appropriate to student activities ranging from grammar, lexical, learning skills, discourse, and genre.

From the explanation described above, the author has a desire to contribute a little to the realization of the 2013 revised Curriculum which will only begin in the 2017/2018 school year and contribute to English language learning for vocational students, especially for students of vocational engineering machining competencies with conducted a research entitled Development of ESP Design for Vocational. The research problem are:

1. How is the analysis of the needs of vocational engineering students in Gresik District in English learning?
2. How is the learning design developed in the ESP-based English language learning process in vocational schools with machining engineering competencies in Gresik Regency based on revised 2013 Curriculum?

METHOD

This research is a qualitative descriptive study that aims to reveal the facts, phenomena, variables and circumstances that occur about vocational English learning of machining techniques in Gresik. Later, this research will interpret and tell the data related to the situation that is happening, attitudes and views that occur in the community, differences between facts, influence on a condition, and others.

This study is limited to the study population are vocational school students with vocational competencies in class X machining techniques in five major Vocational Schools in Gresik Regency, East Java through the implementation of the revised curriculum. The selection of competencies is based on the consideration that students who choose machining techniques are very the amount is compared with the selection in other competencies in Gresik Regency, so that in the development of learning design will be more focused on matters relating to the competency. Data collection techniques by means of triangulation are combining several data collection techniques through need assessment in the form of participatory observation, in-depth interviews, document review, and literature studies that aim not only to dig up data but also to reveal the meaning contained in the research while testing data credibility.

FINDINGS AND DISCUSSION

Needs analysis is carried out not only by giving - and interviewing students as learners only, but also obtained from the need assessment in the form of observation, interviews, and documentation from the English language teachers and productive subjects that are related to the development of learning designs that will be produced. It is made to be able to measure the level of inequality that occurs in student learning from what is expected and what has been obtained. In measuring the gap an analyst must be able to know how big the problem is.

The Steps of Need Assessment Needed

1. Stages of information gathering; find information that majoring in machining engineering has the most students in Gresik Regency, and find five machining vocational schools in Bungah and Manyar District.
2. Stages of identification of gaps; vocational schools is the lack of students' interest in learning the field of English language study, which is not the case in productive fields of study or areas of

expertise because they are considered to be unimportant and not appropriate to their needs, even though they will find many the term is English when they have plunged into a mechanic in the company.

3. Performance analysis; this step is very visible through observations carried out in English classes that are still lacking in using machining terms, in the provision of material or example sentences, whereas in the workshop there are many activities that students do what can actually be used as an example in making sentences or even in material development, so that it is not considered the same as when they are at junior high school level, and the machining expertise or productive study activities are directly carried out in the workshop by directly introducing the tools and practicing them.
4. Identification of barriers and sources; this step can be seen from the results of interviews with students in a structured and profound way to get information about how much students' interest in English and what they need to be able to understand English well as a student majoring in machining engineering. The results of the interview found that 60% of students wanted the material developed to relate to their current field of expertise, namely everything related to machining, and 25% wanted an up-to-date current event, besides that 15% of them even wanted a future picture can be predicted by humans today. They highly appreciate the majority of machining students who are very enthusiastic about productive learning because they like to be able to immediately practice what is taught. And they have understood that the skills they will need when they work. In addition, interviews are also conducted with teachers in the field of English studies about the application of English language learning while teaching students of machining vocational schools using different curriculums are a few obstacles encountered, about students' interest in the material being taught also made great homework for them, about the obstacles that arise in teaching English to vocational machining students, namely the lack of knowledge of teachers in the field of English studies about whatever materials are taught specifically for students of machining techniques.
5. Identification of student characteristics; It is found that the psychology of middle adolescents, namely the age of 15-18 years in the fact that emotions tend to be aggressive (with an opposing attitude) and regressive (running away from reality), but in cognitive facts, they are increasingly able to dissect between something tangible and abstract, so that when they are found with learning material that is less tangible, they tend not to pay attention, even ignore because they assume that it is not needed.
6. Identification of objectives; (1) aspects of spiritual attitude competency, (2) social attitudes, (3) knowledge, and (4) skills, this is where English language skills are very good if combined with technical study skills machining, so that students are skilled in the practice of technical skills and language skills.
7. Determine problems; lack of student interest in the field of English studies, lack of learning resources for students in learning English, the material developed is considered less useful in their daily lives, lack of teacher's knowledge of materials related to machining, lack of awareness of teachers and students on the relevance of English to the development of machining careers.

Analysis of English Teacher Interview

It has been conducted on 10 English teachers in 5 Vocational Schools which are used as a place for data collection, and the analysis is as follows:

- The curriculum makes the process of changing the making of syllabus, lesson plan, and real practice of classroom learning. In essence, all curricula have the same goal, which is to achieve the targets achieved in the form of competent students in the field of study studied. It's just that the addition of additional content in the curriculum makes the teacher preoccupied with it rather than thinking about developing material that suits the needs of students, who are up to date, and who describe the life to come.
- In the revised curriculum, teachers or education practitioners are given the opportunity to develop themselves to design syllabi in accordance with the wishes and needs of students by providing material that is developing and on target.
- Most of the English language teachers conveyed that the interests and talents of most low-tech vocational students in daily learning activities
- Factors originating from students include: lack of activity listening to English accents from native speakers that they can download easily through social media, lack of reading activities and facilities in the form of readings written in English, lack of awareness of the importance of language, especially English in the world of work, so they prefer not to bother to recite foreign languages, lack of group practice in daily communication, lack of activities that produce written work in English, lack of activities that appreciate the ability to speak English as a language that can be a factor supporting students to be able to go international
- Factors originating from the teacher: lack of teacher knowledge of material needed by students majoring in machining engineering, lack of active participation between English teachers and machining vocational teachers in the discussion of material needed to be taught in English, lack of active participation by teachers in participating in development seminar.
- The expectations that all teachers want to achieve are: graduates of machining vocational schools can communicate at least at the intermediate level so they are ready to compete in the world arena, there is a container that can maximally help develop learning media that is increasingly attractive to be able to increase students' interest and talent in English, knowing the material that has to do with student machining techniques and then packaged in the learning of machining vocational students, so they are better prepared to work even abroad with their English language skills.

Analysis of Mechanical Teacher interview

These are as follow:

- The curriculum development by the government is very good to be carried out as a basis for the field of machining engineering, because with that development it can also have an impact on students who actually have an interest in machining to become more motivated with no coercion.
- 2013 curriculum provides reinforcement of 4C (collaboration, communication, creative, and cooperative) which increasingly develops students' thinking by not only being able to practice individually but collaborating in teams. Furthermore, it is supported by an evaluation of HOTS (high order thinking) that can make them more measurable in skills and knowledge.
- It is no longer a secret that machining engineering graduates have a great opportunity to work after graduating from vocational schools, especially in Gresik District as an industrial area. Science and machining skills are needed in the industrial world. Therefore, the interest of most students in the productive machining class arises from themselves.

- For the material in the X grade machining expertise in the basic introduction stage, more about the theories and introduction of heavy and light equipment that support students' understanding of machining practices at the next level.
- Actually the machining material is closely related to English terms that students should be known and known from the beginning and carried out up to the next level.
- The goal of learning machining techniques is to produce machining and competent and professional students and can compete in the world of work.

Analysis of Students Interview

Student interview analysis has summarized interviews with 100 vocational engineering students in vocational schools in Gresik District as sampling from other machining vocational students. That is the analysis:

- Some students enter machining vocational schools on their own wishes.
- Most students prefer productive learning rather than theoretical because they can immediately feel the results that can be achieved and not think too much
- Most students do not understand the importance of the field of language studies, especially English, to be able to improve their competence when they work
- All students still do not understand that many of the machining terms use the English term
- Factors that make students less interested in learning English: lazy to study
- It is rare to hear English, it cannot recite correctly, do not understand the meaning
- Out of 100 students interviewed, 60 students wanted English language material related to machining techniques, 25 students are attracted to current material (up to date), and 15 children wanted material about the future
- Great expectations for their students to be able to communicate with strangers without difficulties and learn interesting English.

Need Analysis

1. Machining vocational students need to know English vocabulary and terms related to their vocational skills so that they are able to communicate as well as practice the things that become their expertise
2. Machining vocational students want to learn things that are contemporary, up to date that have to do with applied technology
3. Vocational students are interested in future technological developments as a form of the development of the world of technology, especially machining.

ESP English Design

Unit	Theme	Materials
1	I am a Mechanical Student	<ul style="list-style-type: none"> • Introduce self and family relationship • Introduce each other • Personal Pronoun
2	You are a Winner of Technical Drawing Competence	<ul style="list-style-type: none"> • Expression of congratulating someone • Vocabularies consist of gratefulness
3	We are Going to Go Practical Industry in Big	<ul style="list-style-type: none"> • Simple future tense • Kinds of verb

	Factory	
4	Mechanical Tools	<ul style="list-style-type: none"> • Descriptive text • Describing people, things, and place
5	Mechanical Engineering Exhibition	<ul style="list-style-type: none"> • Announcement text
6	History of Airplane	<ul style="list-style-type: none"> • Simple past • Present perfect
7	Work Safety	<ul style="list-style-type: none"> • Recount text
8	Once upon a Time	<ul style="list-style-type: none"> • Narrative text
9	Electricity	<ul style="list-style-type: none"> • Functional text
10	Mike is the cleverest in Math	<ul style="list-style-type: none"> • Degree of Comparison • Kind of Adjectives
11	Our Factory has Moved	<ul style="list-style-type: none"> • Giving direction
12	Manufacturing process	<ul style="list-style-type: none"> • Simple present
13	Movement	<ul style="list-style-type: none"> • Number and Time

CONCLUSIONS

The fundamental problems for vocational school machining students are that they do not even understand English terms for machining techniques, about small tools to heavy equipment, activities carried out, and proceeding in a sentence, phrase, or even paragraph, so they still feel less confident in expressing something in English, even though those terms will be found in the world of work later.

It has been explained the background, objectives, process, and results achieved in this learning design development research, then hopefully produce a design that will later be used as an induction of English language teachers in creating targeted teaching materials for engineering vocational school students in Gresik Regency or even in other districts, so that they can get to know the English language in the world of machining earlier as a provision for them to become competent engineers in the machining field.

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