



English for Specific Purpose Needs Analysis at a Vocational High School

The Case of Software Engineering Students

Nina Puspitaloka*, Evi Karlina Ambarwati, Kartika Dewi Nurjanah,
Debibik Nabilatul Fauziah

Universitas Singaperbangsa Karawang, Karawang, Indonesia

**Corresponding author. Email: nina.puspitaloka@fkip.unsika.ac.id*

ABSTRACT

Resources designed explicitly for English for Specific Purposes (ESP) classes can significantly aid in achieving learning objectives and help students acquire targeted skills. This research aimed to analyze the need of teaching English for 110th-grade of Vocational High School students majoring in software engineering in Karawang. Applying the case study, the data on students' needs were gathered through a semi-close-ended questionnaire and interview. The results found that Software Engineering students mostly need vocabulary mastery as well as listening and speaking skills. English is an important student's skill to support them in communicating with foreigners in the workplace. Besides that, the learning materials were found not relevant to software engineering student's English needs. Therefore, the teachers should add supplementary materials related to software engineering.

Keywords: *English for Specific Purpose (ESP), needs analysis, software engineering, Vocational High School (VHS).*

1. INTRODUCTION

Vocational High School (VHS) graduates must have the qualifications required by industry. Therefore, teaching English in vocational schools should emphasize the development of communication skills which align with the vocation. Hutchinson and Waters, (1987) proposed the term English for Specific Purposes (ESP) which involves content and teaching methods that are highly dependent on the needs and interests of students. At the national level, the Ministry of Education endorses the national curriculum which prepares the VHS graduates to use English for professional tasks. Unfortunately, several empirical investigations concluded that the contents of English materials in VHS generally do not match the needs of professions (Margana & Widyantoro, 2017; Purwanti, 2018; Putri, Kher, & Rani, 2018) and lack vocational-related vocabularies (Cahyati, Rahmijati, & Rizkiani, 2014; Haryudin, Yana, & Efransyah, 2020; Mahbub, 2019). In fact, the suitability of the material with the needs of students and industry determines the success of English learning.

Indeed, needs analysis is the foundation for a practical and ideal material development (Basturkmen, 2010). Many researchers have investigated the need of English from various vocations and informed many stakeholders to improve the quality of ESP. For example, students in a Nursing and Software Engineering program admitted their poor English vocabulary as well as low speaking, listening, and writing ability (Susandi & Krishnawati, 2016; Mahbub, 2019). Another research reported the need for English in the Hospitality and Travel Industry which focus on developing Speaking and Listening skill (Putri et al., 2018). Students from another VHS context also mention their need to develop vocabulary mastery (Cahyati et al., 2014).

Hence, it is necessary to address the needs of students to interact with factors such as the learning context and socio-cultural contexts of the profession. The current research aims to analyze the learning situation of the Software Engineering Program from three perspectives, i.e. students, teachers, and vice principal. Software engineering students are the focus of this research in VHS, which uses ESP to determine the current needs of software engineering students

and their future career goals. Thus, the needs analysis in this research can produce a certain learning activity design that can help teachers and facilitators by collecting information from various sources. The findings presented in this article might contribute to the development of course materials for English for Software Engineering VHS students.

2. METHOD

2.1. Research Design

This study aimed to identify the English skills and knowledge of Software Engineering students at VHS students Vocational Engineering Software by applying Hutchinson and Waters (1987) framework. The analysis focuses on the learning situation which involves the perspective of students, teachers, and school administrators. Figure 1 depicts the research procedure.

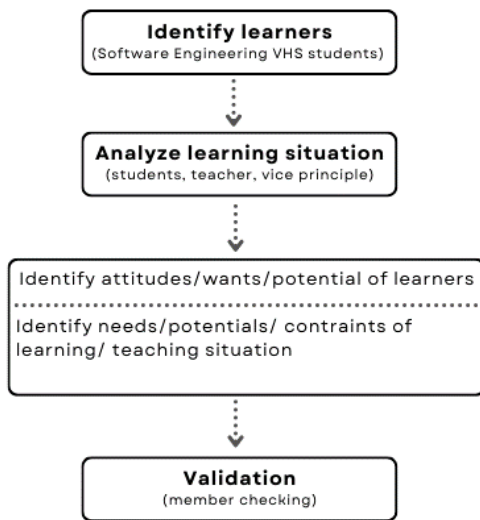


Figure 1 Research procedure (Hutchinson & Waters, 1987).

2.2. Participants and Research Site

The participants of the research were 36 Software Engineering students, one English teacher, and a vice principal at a VHS in Karawang.

2.3. Data collection and analysis

The data were collected from questionnaires and interviews. The participants were asked to elaborate on their attitudes, wants, and potential of learners as well as the constraints of their learning situation. The data were then analyzed for themes. Last, in order to guarantee the validity, member checking was conducted.

3. FINDINGS AND DISCUSSION

This study investigates the need for English from learning situation stakeholders, i.e. students, teachers, and vice principals for the Software Engineering program at a vocational high school in Indonesia. It was revealed that the students believe that English oral communication is very important. Meanwhile, the teachers and vice principal think vocabulary and Reading comprehension are the most important skills to acquire. The following section elaborates on the findings and their position in the current discussion about ESP needs analysis.

3.1. Findings

3.1.1. Learning Situation

The analysis of interview transcripts answered the learning situation. Most students are generally motivated to learn English to get a job after finishing vocational school, so English is necessary. In the learning situation at VHS, almost all the materials learned by software engineering students are directly applied to achieve acceptable practical results. In

addition, the materials used at VHS are the same for software engineering majors and other majors based on general English (GE). Consequently, the teacher's innovation distinguishes the material through adjustments according to the student's field, especially software engineering.

3.1.2. Attitude, Wants, and Potential of Learners

Target needs, according to Hutchinson and Waters (1987) include three components, i.e. necessities, deficiencies, and desires. The term "necessities" represents what the student needs to know to function effectively in the target situation; "lacks" identifies the learner's current language proficiency (to determine which of the necessities the student lacks); and "wants" identifies the learner's subjective desire to learn English. As depicted in Figure 2, the finding shows the questionnaire's results that 90% of the participants agree that English is very important in their profession.

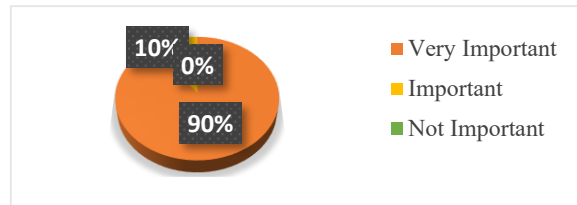


Figure 2 The importance of learning English.

In regards to English skills (see Figure 3), 75% of the participants mentioned Speaking as the main skill to be mastered. The next important skill they need to acquire is Listening and very few of them think that Reading is important in the vocation. Interestingly, no participants mentioned the need to acquire Writing skills. In the interview, they elaborated that speaking is important to communicate and collaborate. Likewise, they believe that frequent Listening practice would allow them to understand the interlocutor well. On the other hand, the results of the learning situation analysis stated a need for more involvement in listening-based teaching to support their needs in learning English. It happens because the learning used only uses general English (GE), contrary to their needs, and should be based on specific purpose English (ESP).

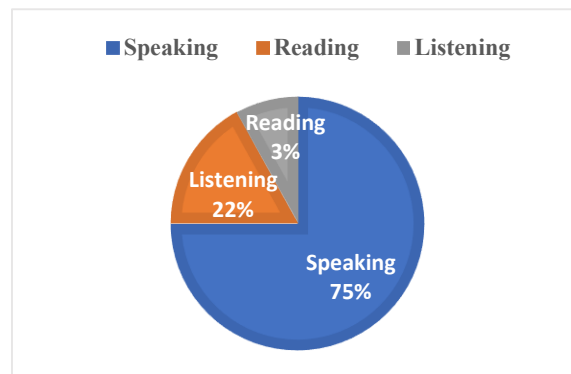


Figure 3 The necessity of English skills.

Meanwhile, the student's perspective of their lack shows that they admittedly lack English vocabulary, pronunciation, and grammar respectively (see Figure 4). In the interview, they elaborated that proper vocabulary, pronunciation, and grammar would make them sound "professional." In line with the teacher's perception of the skills, students must focus on vocabulary. According to the teacher, students need more English mastery regarding vocabulary terms appropriate to software engineering. In addition to mastering reading skills by focusing on vocabulary, it is more effective in broadening students' insights, especially for future careers. Finally, the students' wants as shown in Figure 5 resonate with their attitude in which they desire to acquire oral skills compared to written skills.

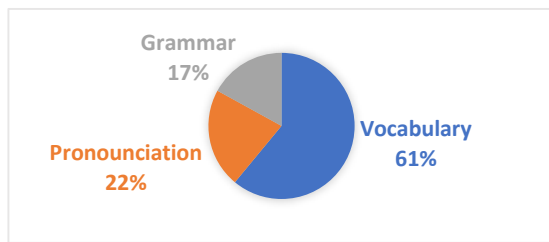


Figure 4 Students' lack of English.



Figure 5 The wants of the student.

3.1.3. Needs, Potentials, and Constraints of Learning and Teaching Situation

An interview with an English teacher and vice principal revealed that as endorsed by the National Curriculum, the English subject for VHS is mainly to practice communication skills so that they are ready for work. The teacher's perception of the skills needed by students is rather different from that of the students. The teacher mentioned that Reading skill is the most important skill to instill, especially the vocabulary aspect.

Moreover, they mentioned that the teaching materials are non-vocational. They regretted that materials used in all majors were the same. However, efforts were occasionally made that the teacher designed materials for the Software Engineering student, such as including texts related to the field. Nevertheless, the teacher explained that vocabulary related to Software Engineering has usually been covered in the vocation subjects. The limitations of the material are deemed insufficient to meet the needs of students in learning English. So, students need teaching materials to support learning activities with specific material-based materials (ESP).

3.2. Discussion

Investigation from the learning situation of English in the Software Engineering program at VHS is described for their attitude, wants, potentials, and constraints. In general, most students are motivated to learn English to get a job after they finish their vocational school, so English is an important thing to learn. In line with government regulations passed in Law Number 1. Article 15 Law Number 20 of 2003 concerning the National Education System clearly states that vocational education is secondary education that prepares students for work (Hakim, Solihati, & Purwaningsih, 2021). In other words, vocational education must equip students with the knowledge and skills to compete in the world of work according to the demands of the world of work (Ixtiarto & Sutrisno, 2016).

Overall, students believe that oral communication skill is crucial for future students. Empirical investigations from various learning contexts also conclude the same needs and wants for developing Listening and Speaking skills (Mahbub, 2019; Putri et al., 2018; Susandi & Krishnawati, 2016). The students believe that speaking skills are very important for them to master before they can implement them in the world of work. Indeed, some of the benefits of public speaking are for personal, professional, and public interests (Lucas & Stob, 2004). Public speaking has benefits for oneself, career, and society. Public speaking will develop speaking skills and build the speaker's confidence. However, the teacher believes that Reading comprehension is important to equip students for future careers. Regardless, both students and teachers view vocabulary as an important foundation to build the skill. Interestingly, previous empirical investigations resonate with the findings about the need for vocabulary mastery in various ESP contexts (Putri et al., 2018; Susandi & Krishnawati, 2016).

Last, both students and teachers admitted that the constraint in English teaching learning in VHS in Indonesia is the materials. They regretted that the teaching materials generally lack vocational-related materials, and hence do not match the demand of industry (Haryudin et al., 2020; Margana & Widyantoro, 2017; Purwanti, 2018). It is suggested that ESP materials are drawn from various up-to-date and reliable sources covering aspects of language, such as vocabulary related to software engineering terms, and balance language skills to develop oral and written communication skills to equip students with targeted needs. Therefore, the teacher has an essential role in understanding the needs of students for the future. So, teachers regardless of the administration labor, are required to be creative in developing materials for each vocation.

4. CONCLUSION

The present study examines the perspective of the learning situation in the Software Engineering program at VHS. Their attitude, wants, potentials, and constraints were collected through interviews and questionnaires. Bearing in mind the limited context of this research, the conclusion is limited to the context of participants. It was found that the learning situation requires the opportunity to develop vocabulary mastery as well as Listening and Speaking skills to enter the industry. Nevertheless, teaching materials that mismatch with the industry demand are the sole institutional constraint in facilitating English learning in the VHS context. In order to provide equal information, future research might include an analysis of the target industry.

AUTHORS' CONTRIBUTIONS

The authors confirm contribution to the paper as follows: (1) study conception and design: Nina Puspitaloka; (2) data collection: Kartika Dewi Nurjanah; (3) analysis and interpretation of results: Evi Karlina Ambawati and Debibik Nabilatul Fauziah; (4) draft manuscript preparation: Nina Puspitaloka, Evi Karlina Ambarwati, Kartika Dewi Nurjanah, Debibik Nabilatul Fauziah. All authors reviewed the results and approved the final version of the manuscript.

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