English Teaching in an Indonesian Vocational High School Majoring Industrial Machinery Engineering

Muhammad Natsir[1], Anwar Soleh Purba[2], Ellyana[3], Anggraini Thesisia Saragih[4], Bakhrul Khair Amal[4]

[1]Universitas Negeri Medan, Indonesia; natsirfbs@unimed.ac.id
[2]Universitas Muhammadiyah Sumatera Utara, Indonesia; anwarsolehpurba12@gmail.com
[3]Insitute Agama Islam Negeri Bengkulu, Indonesia; anwarsolehpurba12@gmail.com
[4]Universitas Negeri Medan, Indonesia; anwarsolehpurba12@gmail.com
[5]Universitas Negeri Medan, Indonesia; anwarsolehpurba12@gmail.com

ARTICLE INFO

ABSTRACT

Theoretically, teaching English in Vocational High Schools (VHS) should relate to and support specific skills required by students based on their major. In reality, teaching English in Indonesian VHS is mostly similar to general schools. Discussions on this issue have been long contested by many researchers in diverse contexts, yet, little focus was given to the Industrial Machinery Engineering major. Therefore, the present study aims to investigate the actual needs of students in the industrial machinery engineering in learning English. By administering questionnaires to 200 students at a VHS in Medan, this mixed method study seeks the students' comprehension of the types of English language skills they used, the purpose of learning these skills, their ability to use the skills, and the basic English language skill they must acquire as part of their English language course arrangement. To scrutinize deeper investigation, in depth-interviews were also employed to ten students in that school. The findings emphasize on several aspects that students of English for industrial machinery engineering require in learning English and establish the students' English language skills gaps, wants, and needs. This paper also provides pedagogical implications that could aid in improving English language teaching tailored to the needs of the students.

Corresponding Author:
Muhammad Natsir
Universitas Negeri Medan, Indonesia; natsirfbs@unimed.ac.id

1.   INTRODUCTION

Since vocational education should concern on developing the students' specific skills regarding their majors, English teaching practices in this field must also be specified to prepare the students to enter particular professions in the future (Mahbub, 2018). This is in line with Indonesian law (UU) number 20, year 2003 about the national education system paragraph 15 stating that vocational education is a part of high school education that prepares the students to have a proper job according to their specific majors. It means that vocational schools must prepare their students with proper knowledge and skills to compete at a professional level that fits the working world demands. The concept relevant to this purpose is recognized as English for Specific Purpose (ESP). The majority of people believe that ESP is simply a language-centered technique for specialized language learners to equip them with specific and professional English language abilities via context-based content. Learning English in an ESP class is similar to learning English in a regular English class; however, ESP classes are distinguished by their diverse learning topics. Furthermore, ESP can be used as a stepping stone to learning any level of English. In this case, ESP should be seen as a method/approach rather than a product. According to Paltridge, Starfield, Ravelli & Nicholson (2012), ESP is a learner-centered method to learning English. The importance of ESP was not recognized until the late 1960's. According to Basturkmen (2010), ESP is related with the idea of a specially designed English subject to satisfy the demand for communication in the realm of science and technology. As a result, precise materials are essential for achieving a goal or learning. The use of need analysis to get the learners' perspective on English learning and language abilities is based on this. The terminology 'specific' in English for Specific Purposes relates to the specialization of aim and target (Dudley-Evans and St John, 1998; Hyland, 2006; and Harding, 2006) in Kusni, 2013, p.37. As indicated in Figure 1 below, Dudley-Evans & St. John (1998) propose a taxonomy of ESP depending on discipline or professional field.
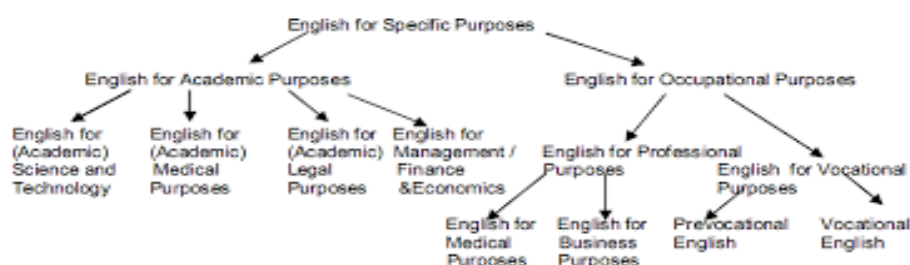

Figure 1. Classification of ESP (Dudley-Evans and St. John, 1998: 6)

The branches of ESP, namely English for Academic Purposes (EAP) and English for Occupational Purposes (EOP), are depicted in Diagram 1 (quoted from Kusni, 2013). This differentiation is critical because they will establish exclusivity in the ESP. EAP stands for English as a course for academic purposes, which enhances the learner's English language skills for academic purposes. EOP, on the other hand, refers to English used in the workplace or for professional purposes (Kusni, 2013). In this regard, EOP involves English for Vocational Purposes because its goal is to improve learners' English skills for professional purposes including Vocational English.

In the framework of vocational education, especially at secondary level (e.g., engineering schools), students are widely streamed/placed into certain occupational disciplines, such as civil, architecture, machinery, and computer engineering. As a result, students must encounter texts that are relevant to their professional knowledge and skills. One of the objectives that students must consider is the development of vocational knowledge and abilities. This has significant implications for English language programs that cater to a wide range of vocational students' needs. As a result, vocationally oriented English language learning has emerged as a viable option. This notion is

contextual with the concept of English for Vocational Purposes (EVP) which is defined as a program that is offered in both secondary school and aims to provide students with English skills that will help them succeed in their chosen field. Therefore, engineering vocational schools are supposed to fully implement this into the English teaching learning, e.g., choosing English materials depending on occupational themes, tasks, and language (Widodo, 2016).

Ironically, the fact shows that the English teaching materials in the Indonesian curriculum does not fulfill the necessity of vocational school students. Furthermore, it was even found the similarities between vocational course books and senior high school course books (Mahbub, 2018; Ronaldo, 2016). Although instructions in English for specific purposes (ESP) have long been devised, implemented, and assessed to address the growing needs of professional and academic communication, the teaching practices in many Indonesian VHS are still far from expectations. For instance, in one of the vocational high schools in Medan city majoring in the industrial machinery, this practice was discovered. This school is under the auspices of the Teladan technology education foundation that has collaborated with a Germany Technology Education foundation. Even so, what presented in the field is not fulfilling the students' needs yet. The English teaching practices were performed similarly with that in the general senior high schools. Besides that, the course book used, as already mentioned, does not support the students' vocational learning goals to develop their knowledge in the industrial machinery concern. The contents of the texts are rarely contextual or even too general. The teacher only focuses on the grammar lesson, not even touching the contextual dictions and terms in the industrial machines or how to explain if there are failures in a machine or anything fit. That factor creates a mismatch between the competence of graduates with industrial demands. Realizing this phenomenon, the teachers are encouraged to design English teaching materials that fit or are relevant to their vocational majors. Regarding this issue, needs' analysis is crucial to conduct as the initial movement into that change as well as the beginning to design the program, teaching material, syllabus, etc. This opinion is in line with Zhu & Liu (2014) contending that need analysis (NA) is the starting point and the center of ESP. Furthermore, Kazar & Mede (2015) confirm that NA is the first step to design any development in education programs. Moreover, need analysis is also functioned to illustrate the condition and actuality of English skills that are related to their fundamental capabilities. With this regard, ESP teachers should equip pupils with distinct and exclusive English skills in order to meet their needs for future employment.

Needs analysis has evolved into one of the most important tools in the language acquisition process, whether it is general English or ESP. It is currently a critical and must-use tool in language instruction (for course guiding and evaluation). Needs analysis can assist teachers in tracing the information on the skills that students have learned as well as the skills that they wish to update and enhance. A need analysis involves numerous steps, including data collection from the standpoint of students' desires, needs, and hopes, as well as beliefs and opinions (Lee, 2016). The history, theoretical foundations, and approaches to needs analysis in language education have been portrayed in this overview (see Lee, 2016). Many experts have emphasized the importance of learners' perspectives in establishing ESP curriculum principles. They suggest that the learners' view primarily encompasses the context in which they will use their English in the future. Furthermore, research on the needs of language learners should be conducted by surveying and interviewing them. Students and faculty members are surveyed and interviewed to learn about their backgrounds and goals. The more obvious the students' needs are, the more clearly expressed the goals become. As a result, the ESP class is seamlessly gaining a success (Lee, 2016). In short, it is concluded that requirements analysis is one of the instruments in material development, which includes needs analysis, goal formulation, and course content organization. As a result, detailed information such as resources, methods, and classroom environment is gathered in order to achieve learning goals and objectives (Boroujeni & Fard, 2013).

Previous research concerning ESP in engineering schools has informed that the English language is extremely important in engineering students' academic and professional lives (Basturkman, 1998;

Hui, 2007; Joesba & Ardeo, 2005; Pendergrass et al., 2001; Pritchard & Nasr, 2004; Sidek & Emsilakh, 2006; Venkatraman & Prema, 2007). Pendergrass et al. (2001), for example, state that English is a necessary tool in engineering education, "Integrating English into engineering, science, and math courses is an effective way to enhance engineering students' oral and written communication performance," says the study (p. 1). Furthermore, Pritchard & Nasr (2004, p. 426) state that "English is of particular significance for engineering and science students since it is the primary foreign language of science and is regarded as an effective means of enabling those students to become acquainted with professional texts written in English." Similarly, Joesba & Ardeo (2005) note that since English has become the de facto foreign language of science and technology, engineering students must contend with this reality while they are students, because English-language books, magazines, handbooks, journals, and other materials are included in their reading lists, and because English would be one of their most important tools on the job market after graduation. Nonetheless, in this industrial revolution 4.0 that has come to us, marked with an integration with cyber technology or the digital world will take massive rule in the engineering field, specifically industrial machinery. To control the change required English language skills capable of industrial needs. Students who decide to continue their education to vocational high school (SMK) are prepared to be ready to work properly after they graduate. Based on the description and facts above, this paper tries to investigate the English language needs of an industrial machinery Engineering in Medan. The study will primarily focus on investigating English specific needs for SMK students using the need analysis (NA) approach corresponding to the theory developed by Dudley - Evans and St. John (1998). They stated that NA can be detailed to some categories: (1) Target situation analysis (TSA), (2) Learning situation analysis (LSA), and (3) Present-Situation analysis (PSA). It is expected that the current study would contribute positively towards the development of EVP in the Indonesian English teaching practice. Furthermore, English teachers working in this area are also expected to be more aware and willing to see the reality that English language teaching in Indonesian vocational high schools is not yet in accordance with the needs of the students, so that they will facilitate proper services as they should. Last but not least, ESP experts and observers will continue the strives to create ideal English language materials for vocational purposes who are further supported by government policies.

2. METHODS

As an attempt to seek the answer of the research question, the present study employed questionnaires and interviews. The questionnaires were administered in order to find out the general depiction of the industrial machinery engineering students' needs of English teaching and learning. Meanwhile, interviews were conducted to investigate further and deeper information on the similar issue. In this study, the questionnaires and interview guidelines of students' needs were designed from the model of Dudley-Evans & St. John's (1998) theory. Needs research, according to them, can be divided into several categories: (1) Target Situation Analysis (TSA), which includes a needs-related analysis needs in the learning process (process oriented needs), (2) Learning Situation Analysis (LSA), which includes a needs-related analysis needs in the learning process (process oriented needs), and (3) Current Situation Analysis (PSA), which includes the level of English language proficiency (English Language Proficiency Level) and the weaknesses of the learners. The questionnaires were administered to 200 students of a vocational high school in Medan majoring industrial machinery engineering, while the interviews were directed to ten students in that school. They were taken from 4 diverse classes consisting of 42% male and 58 % female. The age of the participants ranged from 18-19 years old. The data collection process lasted in 4 days. In this research, the questionnaire and semi-structured interview have been used as the main instrument for the data retrieval process. The questionnaire was distributed to the students in 3 sessions in order to investigate information in detail about (1) TSA (item 1-6) (2) LSA (item 7-8) and PSA (item 9-11). Meanwhile, the second instrument, semi structured interview, consists of 6 questions. Question 1-2 investigates their most English skill needs. Question 3-4 investigate their learning process and method. And question number 5-6 trying

to investigate their opinions, their mastery level in English, their problem in teaching and learning English language in the specific field, time allocation and suggestions from the students as a learner. Furthermore, the data from the questionnaire was analyzed with a statistical descriptive method including the distribution of frequency and percentage of each item, while the data from interviews was analyzed thematically.

3. FINDINGS AND DISCUSSION

Target Situation Analysis: *General English-Oriented Goals*

TSA (Target Situation Analysis) is a type of needs analysis that focuses on assessing the learners' language needs in a professional or academic context and concerns on students' needs at the end of a language course (Robinson, 1991; West, 1994). In addition, Dudley-Evans (1998) argue that TSA encompasses objective, subjective, and product-focused requirements. Outsiders derive the objective and perceived needs from facts, from what is known and verifiable. As a result, being able to accurately spell English words is an objective/perceived need. The aim or target circumstance determines product-oriented needs. The present study informs the students' understanding of their learning goals neglecting their comprehensive understanding of English for vocational purposes. The following table illustrates the students' understanding on their English learning objectives.
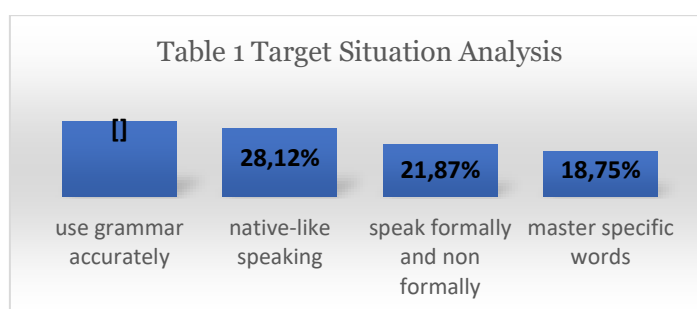
Table 1. Target Situation Analysis

Table 1 provides an information about the target situation analysis. The TSA data items number 1 - 6 indicating that the students' purpose in studying English is to use grammar accurately (31.25%). Meanwhile, 28.12% of the total respondents stated their purpose is to speak like a native English speaker, and 21.87% reported that they wanted to be able to use utterances in English fluently in formal and informal situations. Lastly, only 18.75% stated their purpose to be able to master English specific words relating to their fields. In short, grammar-based objective still became the first priority that the students in the industrial machinery engineering department would like to achieve. In order to strengthen this finding, the interview result has also confirmed the information. The majority of respondents agreed that they learnt English mainly to understand grammar.

P2 : "In my opinion, the most important thing in learning English is to make good and correct sentences, without grammatical errors."

P5 : "I want to be able to arrange the correct sentences, so that people do not misunderstand what I say, the arrangement is orderly and does not violate the rules of grammar."

(Authors' Translation)

According to that finding, Q1 asking about the short-term goal clearly show that majority of students aims at (1) their capability to understand and use grammar properly and (2) fluently speak English. Q2, related to teaching and learning materials, also shows an obvious result; 90.62 % claiming that they need material containing the utterances to communicate in English fluently.

Regarding Q3, which is learning topics, the results were dominated by those who chose the topic about daily life (78.12%). Meanwhile, the Q4's response about the students' mastery of English show significant result, 93.75% stated that they are in the elementary/beginner level. For item number 5, the majority of them admit their weakness is their inability of using grammar properly (71.87). Meanwhile, the students' response for Q6 shows that they need specific English material to transform them to be a fluent and native in English both verbally and written (62.5).

From this information, the thing we may underline is that basically the students are lacking knowledge about the importance of ESP (English for specific Purposes) as well as the study's objectives of this subject. This can be seen from their responses who prefer General English options rather than options related to their industrial machinery majors. Furthermore, there were found other interesting facts about their motivation in learning English. 71.87% students stating their motivation in learning English is to continue their education to college and 28.2% to have a proper job. This is in line with Boroujeni & Fared's (2013) research result maintaining that 64,03% participants stating their motivation in learning English is to continue their education to the higher level and only 31,06 % of them claimed for having a proper job in the future. Therefore, general purposes of English learning were depicted from the responses. Grammar-based English teaching in this EVP context was even chosen as the main objective of the students.

Learning Situation analysis: *Audio Visual-based Discussion Activities*

Subjective, felt, and process-oriented needs are referred to as Learning Situation Analysis (Dudley-Evans & St. John, 1998). LSA also guides learners toward what they desire to learn. They continue that LSA denotes effective techniques and media of learning the skills and language. LSA also refers to why learners want to learn, according to them. They show that subjective and felt needs come from insiders and are related to cognitive and affective processes. As a result, 'to feel confident' is a personal desire. They further clarify that process-oriented needs arise as a result of the learning environment. By investigating data related to learning activities (Q7) and learning methods (Q8) that students like the most, researchers collected the data relating to the students' subjective need. The result of Q7 reported that 71.87% liked discussion, 21.87 % liked simulation and 3.25 % liked role-playing and translating texts. Meanwhile, the responses towards Q8 informed that 78,12 % preferred audio visual such as watching videos or movies, 9.37 % tended to choose memorizing and copying the text from the blackboard while 6,25% liked problem solving. The conditions are depicted in the following tables.

Table 2. Preferred Learning Activities

Table 3. Preferred Learning Media

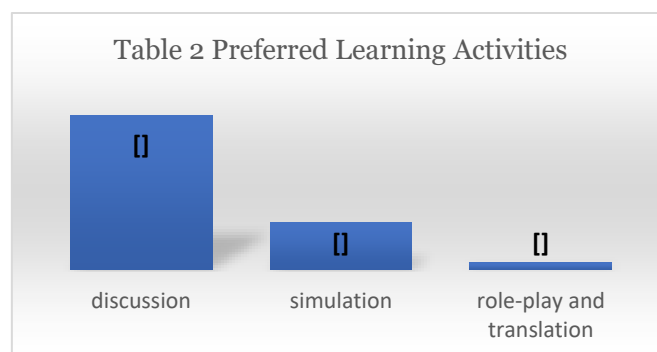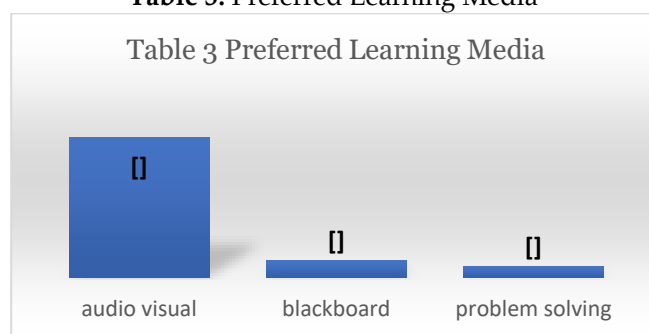

Table 3 Preferred Learning Media

The results of the interview also indicate the similar information, the data show that they are interested in doing diverse learning activities in the class, but the most dominant is discussion. This information can be seen from the excerpt of the participants below.

P1   : "By discussing, I can exchange ideas with friends. and I can also understand what I don't know by listening to other friends' explanations."

P5   : "I am very happy if the activities in the class are simulations."

P7   : "Learning English with videos is always fun. I tend to prefer videos over other learning media."

P10   : "video is easier to digest because it features images that help understand the meaning and also sounds that convey the meaning."
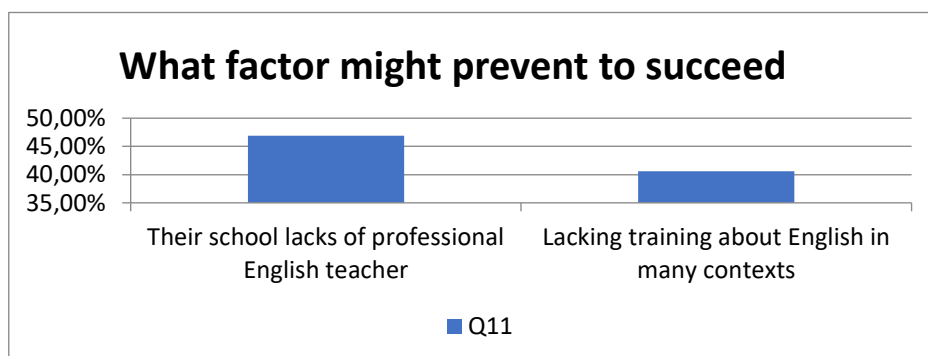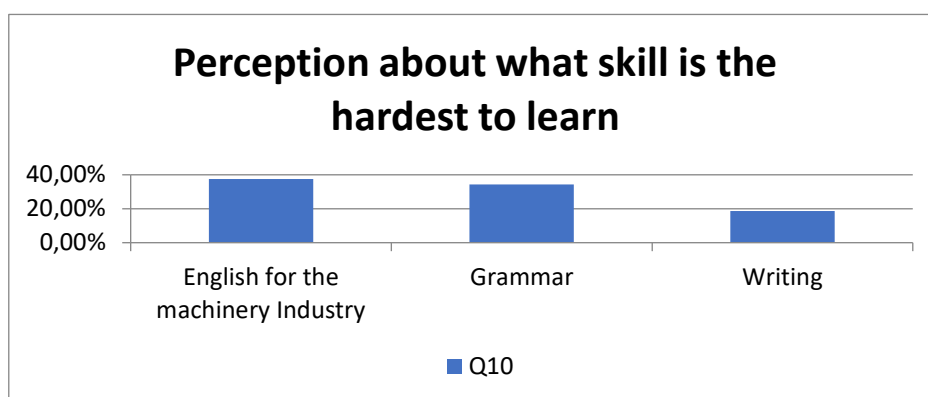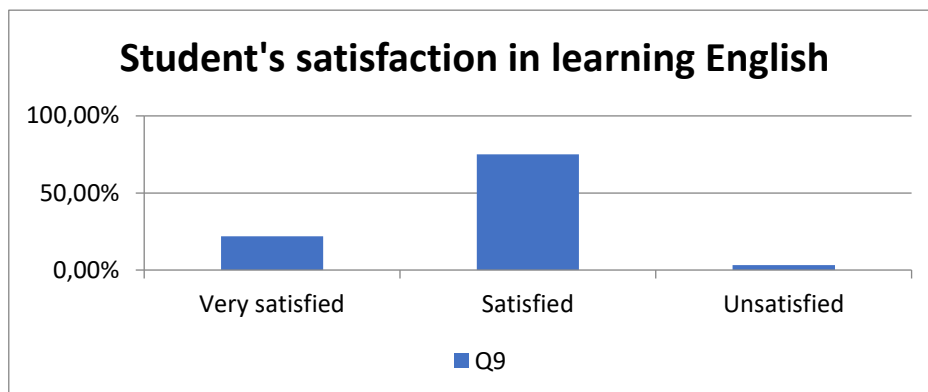
(Authors' Translation)

Discussions are utilized in many EVP settings because it helps the students build their critical thinking. There are several types of discussions classified by Wilkinson, 2016; Kaharuddin & Hasyim, 2020, namely problematic talks center on solutions to complex or simple problems, and the teacher dominates the conversation, information discussions focus on controversial issues in an atmosphere of acceptance, and students have sufficient freedom to raise the issues they want to discuss, and dialectical discussion focuses on the expression, comparison, and refining of students' viewpoints, and students play a dominant role in the discussion; information discussions focus on controversial issues in an atmosphere of acceptance, and students have sufficient freedom to raise the issues they want to discuss. Discussions are also believed to increase the interaction between the participants' existing knowledge and the new information that needs to be learned (Schmidt Henk et al., 2001 in Kaharuddin & Rahmadana, 2020). In terms of the used medium, Sabah & Mohammed (2018) argue that the awareness of the use of audio visualization media and ICT plays a big part in forming autonomous learning for students.

Present Situation analysis: *Learning satisfaction and dissatisfaction*

Present Situation Analysis is a technique for determining what pupils are like at the outset of a language course by examining their strengths and limitations (Robinson, 1991). PSA estimates strengths and deficits in language, abilities, and learning experiences, according to Dudley-Evans & St. John (1998). The questionnaire about the students' satisfaction in learning English (Q9), their perception about what skill is the hardest to learn (Q10), and what factor might prevent them to succeed (Q11) are the most important questions to investigate the data intending to the weaknesses of the students. From the data collected Q9, 75% students stated they are satisfied, 21.87 % stated they are very satisfied, and only 3.12 % unsatisfied. From Q 10, it was revealed that 37,5% mentioned that English for the machinery industry was the hardest skill, 34.37 stated grammar is the hardest skill while only 18.75 stated writing is the hardest skill. Meanwhile, for Q11, 46.87 % stated that their school lacks professional English teachers in teaching, while 40,62% stated that one preventing factor is lacking training about English in many contexts. The following table describes the students' needs in this regard.

Table 4, 5, and 6. Students' responses towards Q9, Q10, and Q11

Student's satisfaction in learning English

Perception about what skill is the hardest to learn

What factor might prevent to succeed

PSA is represented in the items number 9 - 11. In Q9, the collected data shows that the many of them unsatisfied with the learning process these days applied as evident from 53.12 % responding not satisfied and 37.5% stated not satisfied at all. This finding has a similar result to the study conducted by Wu (2012) indicating participants' unsatisfactory in the English learning process at College Business English Course. Regarding the issue of the hardest skill (Q10), 84,37% responded that grammar is the hardest skill to master. Furthermore, the lack of textbooks that are relevant to industrial machinery majors becomes the most dominant answer to the question. To support the aforementioned data, the interview result describes that besides they are still at beginner level, majority of them also stated that the hardest skill to learn is the specific English terms about industrial machinery. They state that there are many specific dictions they have not heard before. Moreover, in terms of time allocation they said that time allocation for English class is not enough to increase the

student's English proficiency. The statement is also in line with the statement of lacking chance to communicate and interact in English that indirectly become one of many factors of their inability to communicate in English fluently and effectively.

P3   : "I feel unsatisfied with the process of English learning in this school, because I still cannot improve my speaking skill and also my English is not even getting better now. I think I am still a beginner English learner."

P7   : "I think there are so many vocabularies that are difficult to understand, like the terms in machines and industries. I need to read many times because it is hard to memorize."

(Authors' Translation)

Teachers and educators must take a closer attention on the issue of students' satisfaction in EVP learning contexts because this can influence the students' learning motivation (Golubovskaya et al., 2019). According to Oliver (1997), satisfaction is a feeling of pleasure derived from attaining a desired goal. Student satisfaction with learning outcomes and the teaching process is a key component in motivating students to perform well in EFL classes (Wu, Marek, & Yen, 2012; Rashidi & Moghadam, 2014). According to Wu, Tennyson, and Hsia (2010) and Asakereh and Dehghannezhad (2015), the learning environment has a significant impact on EFL student satisfaction. Furthermore, according to Bolliger (2004), Booker and Rebman (2005), and Jones (2008), the teacher's support improves students' pleasure and boosts their motivation to learn.

4.   CONCLUSION

The findings concluded that basically the process of learning EVP in the industrial machinery engineering classes is not yet effective for it still could not fulfill the needs or the expectations of the students in vocational schools. The evidence also mentioned that students were unsatisfied with the teaching and learning services. Given these facts, EVP teachers together with the school are responsible to give more attention to the English learning and teaching process especially in vocational. One of some possible solutions might be to give more opportunities like more training to those who are able to strengthen the skill they need as things they use to compete to have proper jobs that fit to their major. That opportunity might be like a presentation of a specific English material about industrial machinery, a specific curriculum, a specific syllabus, and specific material suitable to their major. This English learning experience will be very useful as a supplementary skill given before they encounter the professional world. For the teacher, this experience will keep them aware of the importance of Need Analysis before they conduct teaching in vocational schools. With the need analysis, they may find the needs, the weakness, and the wish of the students in learning English. Moreover, they are also able to identify the learning procedure or learning activity, the media, the level proficiency of them so that they are able to choose and determine the learning procedure that fits their needs. In the other words, from the need analysis process the teachers are able to determine the better learning idea applicable in the classroom that might make their competence with the competence professional world needed. The present study has many weaknesses; therefore, it is encouraged to conduct further studies. The next researchers are suggested to develop the learning materials for EVP in the major of industrial machinery engineering, so that the students will have more opportunities to learn English relevant to their basic skills which are applicable in their professions.

REFERENCES

Akyel, A. S., & Ozek, Y. (2010). A language needs analysis research at an English medium university in Turkey. Procedia - Social and Behavioral Sciences, 2(2), 969–975. https://doi.org/10.1016/j.sbspro.2010.03.136

Al-hamlan, S. & Baniabdelrahman. (2015). A Needs Analysis Approach to EFL Syllabus Development for Second Grade Students in Secondary Education in Saudi Arabia: A Descriptive Analytical Approach to Students' Needs. American International Journal of Comtemporary Research, 5(1).

Amin, M. (2017). Pragmatic competence and learning needs of English for students of Tourism Vocational Schools in Nusa Tenggara Barat Province, 4(4), 53–61.

Asakereh, A., & Dehghannezhad, M. (2015). Student satisfaction with EFL speaking classes: Relating speaking self-efficacy and skills achievement. Issues in Educational Research, 25(4), 345-363.

Atkinson, D. (2003). L2 writing in the post-process era: Introduction. Journal of Second Language Writing, 12(1), 3-5.

Barreto, L., Amaral, A., & Pereira, T. (2017). Industry 4.0 implications in logistics: an overview. Procedia Manufacturing, 13, 1245–1252. https://doi.org/10.1016/j.promfg.2017.09.0 45

Basturkmen, H. (2010). Developing Courses in English for Specific Purposes. Palgrave Macmillan.

Becker, R. R. (1995). The second language writing of Chinese ESL students: Transfer and writing development. Unpublished doctoral dissertation, University of Illinois at Urbana-Champaign.

Benešová, A., & Tupa, J. (2017). Requirements for Education and Qualification of People in Industry 4.0. Procedia Manufacturing, 11(June), 2195– 2202. https://doi.org/10.1016/j.promfg.2017.07.3 66

Benesch, S. (2001). Critical English for Academic Purposes: Theory, Politics, and Practice. Lawrence Erlbaum Associates.

Bolliger, D. U., & Martindale, T. (2004). Key factors for determining student satisfaction in online courses. International Journal on E-learning, 3(1), 61-68.

Booker, Q. E., & Rebman, C. E. (2005). E-student retention: Factors affecting customer loyalty for online program success. Issues in Information Systems, 6(1), 183-189.

Boroujeni, S. A., & Fard, F. M. (2013). A Needs Analysis of English for Specific Purposes (ESP) Course For Adoption Of Communicative Language Teaching :(A Case of Iranian First-Year Students of Educational Administration), 2(6), 35–44.

Brown, M., & Hale, K. (2014). Applied Research Methods in Public & Nonprofit Organization. San Fransisco: Jossey-Bass.

Cohen, L. (2007). Research Methods in Education. In Research Methods in Education. https://doi.org/10.4324/9780203029053

Diana, S., & Mansur, M. (2018). Need Analysis on English Teaching Materials for Ict Students. ETERNAL (English, Teaching, Learning, and Research Journal), 4(2), 209. https://doi.org/10.24252/eternal.v42.2018.a6

Dudley-Evans,T, & St. John,M. J. (1998). Developments in English for Specific Purposes: A multi-disciplinary Approach. Cambridge, Cambridge University Press.

Golubovskaya, E. A., Tikhonova, E. V., & Mekeko, N. M. (2019, May). Measuring Learning Outcome and Students' Satisfaction in ELT: E-Learning against Conventional Learning. In Proceedings of the 2019 5th International Conference on Education and Training Technologies (pp. 34-38).

Haryati, S., Wahyuni, D. S. & Dewi. (2018). Investigating the English Needs of Occupational Safety and Health Students at Tertiery Education Level: A Need Analysis of ESP Learners, 173 – 179. http://repository.umy.ac.id/bitstream/handle/123456789/25916/Prosiding%20Cotefl%20reserved.pdf?sequence=1&isAllowed=y#page=173

Hinkel, E. (1994). Native and nonnative speakers' pragmatic interpretations of English texts. TESOL Quarterly, 28(2), 353-376,

Hyland, K. (2003). Second language writing. New York: Cambridge University Press.

Hyland, K. (2004). Genre and second language writing. Ann Arbor, MI: The University of Michigan Press.

Hyland, K. (2007). Genre pedagogy: Language, literacy and L2 writing instruction. Journal of second language writing, 16(3), 148-164.

Hutchinson, Tom and Waters, A. (1991). English for Specific Purposes. In English for Specific Purposes: A Learning-centered Approach. University of Cambridge. https://doi.org/10.4324/9781315716893-5

Joesba, M., & Ardeo, G. (2005). Student engineers, ESP courses, and testing with cloze tests. ESP world, 2(10).

Jones, A. C. (2008). The effects of out-of-class support on student satisfaction and motivation to learn. Communication Education, 57(3), 373-388. https://doi.org/10.1080/03634520801968830

Kaharuddin & Hasyim, M. (2020). The Speech Act of Complaint: Socio-Cultural Competence Used by Native Speakers of English and Indonesian International Journal of Psychosocial Rehabilitation, 24(6), 14016-14028. doi: 10.37200/Ijpr/V24i6/Pr26135

Kaharuddin, K., & Rahmadana, A. (2020). Problem-Based Group Discussion: An Effective ELT Technique to Improve Vocational High School Students' transactional Speaking Skills. Jurnal Ilmu Budaya, 8(2), 247-258.

Kazar, S. G., & Mede, E. (2015). The Perceptions of ESP Students' Target Needs: A Case Study. Procedia - Social and Behavioral Sciences, 191(2001), 2526–2530. https://doi.org/10.1016/j.sbspro.2015.04.57 4

Kuhn, D. & Udell, W. (2003). The development of argument skills. Child development, 74(5), 1245-1260.

Kusni. (2013). Reformulating English for Specific Purposes (ESP) in Indonesia: Current Issues and Future Prospects. SELT 2013 PROCEEDING, 84, 487–492. http://ir.obihiro.ac.jp/dspace/handle/10322/3933

Lee, C.-L. (2016). Principles and Practices of ESP Course Design-A Case Study of. International Journal of Learning, Teaching and Educational Research, 15(2), 94–105.

Li, J. (2014). Needs Analysis of Business English Undergraduates and the Implications to Business English Curriculum Design. Advances in Language and Literary Studies, 5(4). https://doi.org/10.7575/aiac.alls.v.5n.4p.33

Mahbub, M. A. (2018). English Teaching in Vocational High School: A Need Analysis. JEELS, 5(2), 229-258.

Oliver, R. L., Rust, R. T., & Varki, S. (1997). Customer delight: foundations, findings, and managerial insight. Journal of Retailing, 73(3), 311-336. https://doi.org/10.1016/S0022-4359(97)90021-X

Paltridge, B., Starfield, S., Ravelli, L., & Nicholson, S. (2012). Doctoral writing in the visual and performing arts: Two ends of a continuum. Studies in Higher Education, 37(8), 989-1003.

Pendergrass, N. A., Kowalczyk, R. E., Dowd, J. P., Laoulache, R. N., Nelles, W., Golen, J. A., & Fowler, E. (2001). Improving first-year engineering education. Journal of Engineering Education, 90(1), 33-41.

Pritchard, R. M., & Nasr, A. (2004). Improving reading performance among Egyptian engineering students: principles and practice. English for Specific Purposes, 23(4), 425-445.

Rashidi, N., & Moghadam, M. (2014). The effect of teachers' beliefs and sense of self-efficacy on Iranian EFL learners' satisfaction and academic achievement. Tesl-Ej, 18(2), 2.

Robinson P. ESP today: A practitioner's guide. New York: Prentice Hall; 1991.

Ronaldo, O. (2016). Teaching material for English subject in vocational high school. Proceedings of ISELT FBS Universitas Negeri Padang, 4(2), 170-179.

Sabah, A., & Mohammed, E. (2018). ESP Needs Analysis: A Case Study of PEH Students,0–19. https://doi.org/10.17265/15398072/2016.12 .00

Sidek, H. M., & Emsilakh, H. D. (2006). An Analysis of the ESP for Economics: Approaches to Determine the Feasibility of a Reading Program at Secondary Level as.

Venkatraman, G., & Prema, P. (2013). Identification and Validation of ESP Teacher Competencies: A Research Design. English Language Teaching, 6(2), 27-31.

Widodo, H. P. (2016). Teaching English for specific purposes (ESP): English for vocational purposes (EVP). In English language teaching today (pp. 277-291). Springer, Cham.

Wilkinson, K., & Barter, P. (2016). Do mobile learning devices enhance learning in higher education anatomy classrooms? Journal of Pedagogic Development, 6 (1), 14-23.

Wu, Y. (2012). An empirical study on needs analysis of college business english course. International Education Studies, 5(2), 216–221. https://doi.org/10.5539/ies.v5n2p216

Wu, W. C. V., Marek, M., & Yen, L. L. (2012). Promotion of EFL student motivation, confidence, and satisfaction via a learning spiral, peer-scaffolding, and CMC. International Journal of Computer-Assisted Language Learning and Teaching (IJCALLT), 2(3), 54-75. https://doi.org/10.4018/ijcallt.2012070104

Wu, J. H., Tennyson, R. D., & Hsia, T. L. (2010). A study of student satisfaction in a blended e-learning system environment. Computers & Education, 55(1), 155-164. https://doi.org/10.1016/j.compedu.2009.12.012

Zafarghandi, A. M., Sabet, M. K. & Delijani, Y. K. (2017). An Investigation into the Effectiveness of an ESP Course: A Case Study of Graduate Students of Psychology, 1 – 24.

Zhu, W., & Liu, D. (2014). Study on the Theoretical Foundation of Business English Curriculum Design Based on ESP and Needs Analysis, 4(1), 68–74. https://doi.org/10.5539/hes.v4n1p68

Zoghoul & Hussein (1985). language needs of undergraduate students from different disciplines, including natural sciences, engineering, medical sciences, economics, administrative sciences, and arts and humanities.1 – 28. https://doi.org/10.5539/hpk.c5t1p128