



## Aquaculture and Fisheries English Specific Purposes Students': Needs Analysis Research

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### Abstract

This research aims to determine the deficiency skills of ESP that need to be prioritized in the learning process of Aquaculture and Fisheries students. The methods used in this research are quantitative research with a questionnaire to measure their deficiency score and purposive sampling to take data into account precisely. However, the participant is not only from students but also from experts who have the expert insight of target learners in the occupation field. This research found that vocabulary and communication skills need to be prioritized in ESP learning for Aquaculture and Fisheries students, with a need score 2,9 and a lack score 2,6 for vocabulary skill and need score 2,5 and a lack score 2,2 for communication skills. In conclusion, participants are needed to master both of the skills to fulfill the occupation need forward. Then they also realize if it is difficult to master both of skills.

**Keywords:** Deficiency Analysis, ESP, Aquaculture and Fisheries

### *Analisis Kebutuhan: English Spesific Purposes Mahasiswa Aquaculture dan Perikanan*

#### *Abstrak*

*Penelitian ini bertujuan untuk menentukan keterampilan kekurangan ESP yang perlu diprioritaskan dalam proses pembelajaran siswa akuakultur dan perikanan. Metode yang digunakan dalam penelitian ini adalah penelitian kuantitatif dengan kuesioner untuk mengukur skor kekurangan dan pengambilan sampel purposive untuk memperhitungkan data secara tepat. Namun, peserta tidak hanya dari siswa tetapi juga dari para ahli yang memiliki wawasan ahli dari pelajar target di bidang pekerjaan. Penelitian ini menemukan bahwa keterampilan kosa kata dan komunikasi perlu diprioritaskan dalam pembelajaran ESP untuk siswa akuakultur dan perikanan, dengan skor kebutuhan 2,9 dan kekurangan skor 2,6 untuk keterampilan kosa kata dan perlu skor 2,5 dan kekurangan skor 2, 2 untuk keterampilan komunikasi. Sebagai kesimpulan, peserta diperlukan untuk menguasai kedua keterampilan untuk memenuhi kebutuhan pekerjaan ke depan. Kemudian mereka juga menyadari jika sulit untuk menguasai kedua keterampilan.*

**Kata Kunci:** Analisis Deficiency, ESP, Aquaculture dan Perikanan

## INTRODUCTION

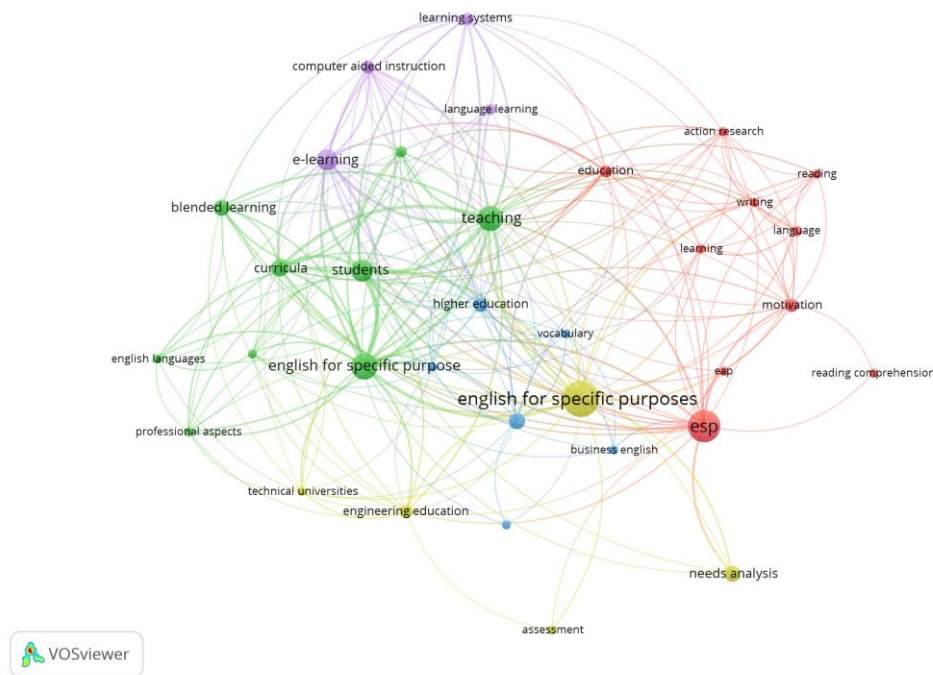
A learner-centered approach to teaching English should be considered as one factor in arranging the curricula and how the teacher delivers the material. The material should be enabled with the learner and target needs. It means the material should be constructed carefully to achieve two perceived goals. The English and non-English Study programs must learn English for Specific Purposes. Hutchinson & Waters, the researcher who proposed the English Specific Purposes, defines learning needs as what the learner needs to do to learn (Hutchinson & Waters, 1987). It aligns with Benesch, (2001) belief that needs are directly related to the target scenario's requirement. However, English subjects in university must be concerned about field study to support students from non-English study programs in academic, professional, or workplace contexts (Indrasari, 2016). Then the question which appears align with the statement above is, "Are the material meets the standard of academic, professional, or workplace contexts since the students have different background and need of English?"(Indrasari, 2016).

The standard test of academic, professional, or workplace contexts currently uses the general test such as TOEFL and IELTS, which are the international standard. However, both of the test do not reliable in their specific field. From the phenomenon above, English for Spesific Purposes (ESP) with the learner and target need orientation have to occurred. Previous studies revealed that needs analysis research occurred in several study programs to measure their needs and guide how they construct the material (Abd et al., 2020; Alsamadani, 2017; Mostafavi et al., 2021). One research describes if general dissatisfaction with fulfilling some learner demands, including those connected to the learning objectives, productive competencies, monitoring system, and educational facilities. Additionally, there were substantial differences between the two participant groups' opinions of how effectively the instructional material met the intended goals and how real it was (Mostafavi et al., 2021)

According to a prior survey focused on the fisheries program, the student claimed that they acquired English because they wanted to communicate in the fisheries profession. The students' department of fisheries product processing technology said they must study English-language content connected to fisheries to master the language. Most fishing activities, including selling fishery goods, rely on speaking abilities, thus, they sought to improve this talent. In other words they started to demand speaking abilities. Students said that speaking English was a severe difficulty to them. Thirty fishing students, therefore, hoped that the school would create an ESP Material for studying English in order to maximize their proficiency (Tahang et al., 2021).

Meanwhile, the previous study also find whether the ESP textbook complied in specific needs of students or not. The findings indicate that Chababar Maritime University's management and fisheries faculties' usage of ESP textbooks did not consider students' particular needs, and that these textbooks could not inspire students and aid their language acquisition (Soleimani & Khah, 2014).

However, ESP research trends are already in various majors and fields. Figure 1. describes the five cluster in previous research with a "English specific purposes" as their title and an analysis based on the papers' occurrence. The researcher found 241 research paper with various keywords or scopes in their field. Table 1 shows the deployment of the cluster in Figure 1.



**Figure 1. Previous Study of ESP**

The five clusters in the previous study describe the occurrence of keywords occurring in the scope of learning, such as action research, which means the previous study has been done to research the ESP in the context of Action research. Moreover, the previous study also did the research in the context of engineering education in cluster 4, it means research on ESP has also been done in engineering education, which means the previous study does not have a history of research in fisheries and aquaculture deeper in ESP.

Need analysis as the common analysis to find the need of the subject for several specific knowledge also becomes part of the keyword in cluster 4. It means the use of need analysis was common occurred in ESP. Generally according the data in figure 1 and table 1. ESP presence to focus in learning procedure, document, method, and several specific knowledge such as business English and engineering education.

**Table 1. Cluster in previous study**

No	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5
1.	Action Research	Blended Learning	Business English	Assessment	Computer Aided Instruction
2.	Eap	Curricula	Corpus Linguistics	Engineering Education	E-Learning
3.	Education	Education Computing	English For Specific Purposes	English For Specific Purposes	Language Learning
4.	Esp	Engsih For Specific Purposes	Higher Education	Need Analysis	Learning Systems
5.	Language	English Languages	Sustainable	Tecnical	

No	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5
			Development	Universities	
6.	Learning	Professional Aspects	Vocabulary		
7.	Motivation	Students			
8.	Reading	Teaching			
9.	Reading Comprehension	Teaching And Learning			
10.	Writing				

Thus, the researcher found a gap in research in a specific field: ESP in marine, aquaculture, and fisheries. Therefore, current research stands for the deficiency analysis to measure the needs analysis of ESP in Fisheries or aquaculture Student, Academic. Deficiency Analysis is the method of needs analysis that has been created to consider both the demands of the goal environment and the learners' current needs and desires (West, 1994)

**METHODS**

This research used a quantitative approach with a questionnaire as the data collection to gain the data of deficiency analysis. The questionnaire consists of three parts: (a) a list of possible target-situation skills provided by a specialist informant, in current research is a university Aquaculture tutor and Work environment expert; (b) a needs questionnaire using a "1 = unnecessary to 4 = essential" scale to establish target situation need for each of the sub-skills; and (c) a lacks questionnaire using a "1 = no difficulty to 4 = very difficult" scale to establish present-situation deficiency of the total requirements and deficiencies of the group are calculated after each questionnaire is handed to either specialized tutors or students. The research participants from the aquaculture and fisheries students and experts. The analysis of the research use deficiency analysis from West (1994), which measure needs analysis from two sides: the goal environment and the learners' current needs and desires.

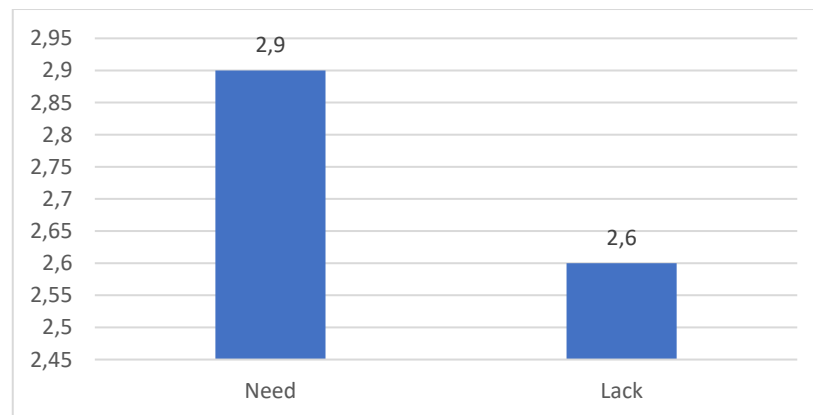
**RESULTS AND DISCUSSION**

**Vocabulary skills**

Vocabulary skill knowledge of the aquaculture students refers to the target situation to master scientific word operation, nouns, and adjectives. How the students understand and use scientific words is the most important of this skill. It align with the importance of vocabulary to teach in the class English Specific Purposes. Furthermore, (Nation, 2021)] also explore how to teach vocabulary in class, such as extensive listening (Rodgers, 2018) and extensive reading (Shen, 2009; Taufiqulloh et al., 2018)

Recognition of form, the requirement for meaning retrieval, the spacing between repeats, the appearance of the same words in various morphological forms, and the presence of the words across multiple sentence contexts are all factors that favor learning through the input (various meetings). However, Nation, (2021) proposes several suggestions for teaching the vocabulary; they control the vocabulary level and match it with the needs of students, Train in theme-based learning and activities that require repetition attention to the same topics. Using word cards to retain vocabulary learning, Monitoring extensive reading and listening, have strong fluency development to use the vocabulary in the target situation. The target situation point of view also straight to state if in aquaculture field recommend the

mastery of vocabulary to push the use of a word in the context of international occupation/scientific discussion after the students pass their study.



**Figure 2. Deficiency score of vocabulary skill**

The results show that aquaculture vocabulary skills are needed by a mean score of 2,9. The participant's needs of vocabulary skill in the job occupation mostly focus on how they use the word in their field that is related to aquaculture and fisheries. Furthermore, the result also showed that they can identify and understand the verb, nouns, adjectives and adverb. However, the more the students and experts master the vocabulary the more they tailor the word into the correct sentence.

Figure 2 shows the difference between the need of vocabulary skills and the lack of vocabulary skills. The lack of vocabulary skills indicates difficulties to master the vocabulary it means the deficiency of vocabulary skills occurred by the higher score of need than the score of lack. According to figure 2, teacher of ESP should be aware of improving the ability to enhance vocabulary skill related to fisheries and aquaculture. In addition, a dozen research occurred for strategies in ESP Context for vocabulary learning by modifying Schmitt's taxonomy to gain more insights (Shen, 2009). In other ways it also can be done by learning media with video to enhance their vocabulary mastery, then videos should be used because they can help students retain information by providing visual cues and improving their understanding of spoken language (World, n.d.).

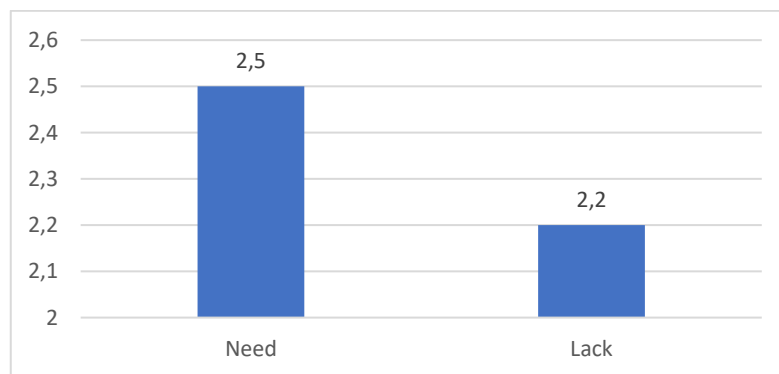
Furthermore, vocabulary mastery takes an essential role in ESP for fisheries and aquaculture field, it will indirectly affect how far the understand and the ability to transfer the information through the language especially English. It also directly supports basic language production skills in ESP such as speaking, reading and writing. Not only them but also the basic skills of receptive language like listening. Nevertheless, the teacher must also know the specific vocabulary in Fisheries and Aquaculture.

### **Communication skills**

Delivering the student's thoughts is the key to establishing communication skills, and tailoring those skills is irrefutable to mastering speaking skills. The difference between Speaking skills in ESP and general concern in the topic of discussion. The topic discussion already mastered by the students, in general, indicates the result of English major in their High School. Meanwhile, ESP students should realize if they have to connect their speaking skill with a current context in their major in fisheries or marine topics.



The ideal class of ESP is the teacher has to train the students in a correct way to give a context or target situation and more vocabulary to enhance their speaking skills (Al-Malki et al., n.d.). However, to reach a better communication skills improvement, a teacher has to consider the factors in communicating in English also strongly relate with interlocutors, classroom activities, topics, tasks, classroom contracts, and teaching media are the factors that also influence students (Sjaifullah & Laksmi, 2022)



**Figure 3.** Deficiency score of communication skills

The results show that communication skill is needed, it is indicated by the mean score is 2,5, and the lack score is 2,2. It means the need score is higher than the lack score, and thus communication skills in English are vital to mastery. It aligns with how they will use the skill in the job occupation. They will often use communication in English. However, the communication skill that focuses on the speaking process must be considered to be taught more than the others. It will enhance the confidentiality of students to speak aloud in English and use a specific word in fisheries and aquaculture. How the students deliver their thoughts and present the information in ESP class is the way to gain a better ability to use English. many research found the effectiveness of role-play technique in ESP class (Islam et al., n.d.; N, 2019; T, 2017; XL-IE, 2010). Thus the researcher suggests using role play to enhance the speaking ability in ESP with the target situation as the setting place.

Furthermore, The participant also agreed on how to speak fluently with native speakers and how they manage themselves in focus group discussions and presentations. Production communication skill also needs to connect with how they share their thoughts.

**CONCLUSION**

Altogether, ESP learning is needed for all majors on campus. However, a teacher must consent to deliver the ESP material focused on the target learner and occupation. They are vocabulary and communication skills, they need to be considered as the primary focus to arrange the lesson plan. Furthermore, the study found a deficient score of vocabulary and communication skills. It means the participant's need for vocabulary is higher than the participant's lack. They realize that vocabulary mastery is essential but they also realize if it is hard to master the vocabulary. On the other side, participant need of communication skill also higher than participant lack. They recognize that communication such as speaking, is essential. However, they also know if they felt the struggle to master those skills.

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