A Study on English Reading Comprehension Difficulties in the Context of ESP: A Case of Fish Processing Technology Students

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Abstract

Reading comprehension is a crucial skill that should be mastered by students in English for Specific Purposes (ESP) where access to updated scientific information often requires a proper understanding of English texts. This research aimed at investigating the difficulties faced by Fish Processing Technology students in comprehending English reading texts which are relevant to their field. This was quantitative descriptive research where the data were collected through questionnaires and worksheets involving 20 second semester students. The research results show that 100% of the students have a lack of attention. Their focus is easily distracted while reading a text, especially English texts. Next, 95% of the students have limited knowledge of generic structure. They cannot understand the text's meaning because they do not know how to translate it grammatically. After that, 85% of the students faced difficulties in extracting the text meaning because of their lack of vocabulary mastery. They get a lot of unfamiliar words in the texts. Then, 75% of the students find obstacles in understanding the meaning of the text because they have no background knowledge about the text topic. 55% of the students have no motivation in reading, especially English texts. 50% of the students have limited working memories. Therefore, the researcher concluded that there are seven difficulties faced by the students, named attention, knowledge of generic structure, vocabulary, sentence comprehension, background of knowledge, motivation and working memory.

Keywords: Reading Comprehension, ESP Students

1. Introduction

The role of English for Specific Purposes (ESP) has significantly increased in today's global academic and professional world. ESP as a chapter of English language teaching covers the specific needs of learners in distinct academic or official domains (Dudley-Evans & St. John, 1998). It addresses the particular English learning needs of students in the Fish Processing Technology study program, which covers understanding international scientific literature,

standard operating procedures, manuals, research articles, and regulatory guidelines related to fisheries and marine processing product.

The majority of ESP students, related to the relevance of English proficiency in their field, face more challenges with reading comprehension, especially when they deal with academic and technical publications. Reading comprehension, known as the process of constructing meaning from written text (Grabe & Stoller, 2011). It is a sophisticated cognitive activity that involves decoding, vocabulary recognition, syntactic processing, and inferential reasoning. This procedure is significantly more difficult in the setting of ESP because of the presence of technical terminology, complex sentence structures, and unfamiliar discourse patterns (Basturkmen, 2006). Therefore, these complexities drive them confused and fail to understand the texts.

According to the numbers of previous studies, reading comprehension presents particular difficulties for students with ESP. The learners often have no appropriate prior knowledge and vocabulary mastery in their field of study (Tavakoli & Koosha, 2016). This situation leads to a decrease in their reading efficiency and an increase in cognitive burden. In the other case, it emphasizes that ESP students also faced any obstacles due to low comprehension of the materials and their unfamiliarity with them (Sifakis, 2003).

Fisheries and marine reading materials are often associated with scientific literature that provide precise and in-depth explanation of biological, chemical, and technological processes. These traits present difficulties for the students who struggle with reading comprehension and specialized vocabulary. Furthermore, non- linguistic factors like lack of confidence, nervousness, and low drive make things much more difficult (Zarei, 2008)

1.1 Reading Comprehension

Reading comprehension is the process of deriving and organizing the meaning from the written material through the interaction between the reader, the text, and the reading environment (Snow, 2002). It is a complicated process that calls for both higher-level processes like drawing inferences, identifying certain words, and understanding the texts' structures, as well as lower-level processes such as word recognition and decoding (Grabe, 2009).

The ability to apply cognitive and metacognitive reading methods as well as a linguistic understanding (vocabulary, syntax, and grammar) affects reading comprehension, especially in the setting of English as a Foreign Language. Lack of knowledge and vocabulary expertise are the main obstacles. In the other opinion, reading behaviour and lack of priority knowledge are factors that contribute to poor reading comprehension in ESP (Aldreson, 2000).

1.2 Reading Difficulties

Reading difficulties indicate students' inability in deducing the meaning of the written materials. This problem is caused by a number elements including linguistic, cognitive, and affective. Linguistic factor covers vocabulary mastery, grammatical comprehension, and prior knowledge of sentence structure (Nation, 2001). Besides, cognitive issues also include a lack of cognitive abilities in organizing, drawing conclusions, or understanding the content of the text (Pressley & Afflerbach, 1995). Conversely, self-efficacy, motivation, attitude, and anxiety are examples of affective components. Students who lack of confidence in their ability to read

develop anxiety, which will limit their ability to concentrate and comprehend the texts (Zarei, 2008).

ESP reading issues are highly specialized. For example, students enrolled in study program of Fish Processing Technology may encounter difficulties in understanding data presented in charts or graphs, comprehending chemical processes description, or identifying terms associated with international standards of food safety (Tavakoli & Koosha, 2016).

1.3 English for Specific Purposes

The teaching and learning of English tailored to the unique requirements of students in certain academic, professional, or vocational domains which is known as English for Specific Purposes (ESP). It is point contextualized language use that is appropriate for real communication objectives and learners' target discourse communities (Dudley-Evans & St. John, 1998).

1.4 Objectives

Based on these facts, it is crucial to identify all the students' difficulties in reading comprehension so that the lecturers can find the right ways to solve it. Therefore, the researcher decided to conduct this research properly entitled "A Study on English Reading Comprehension Difficulties in the Context of ESP: A Case of Fish Processing Technology Students." These research results are going to be developed as a specific material for the writer's furthers Research and Development (R&D) that is related to the need analysis and designing of English instructional materials for students at Fish Processing Technology study program.

2. Method

This study was conducted at the Fish Processing Technology Study Program at the Institute of Fishery and Marine Palu from January to March 2025. The research population was all second-semester students in this study program. This was descriptive quantitative research study, where data were collected through a questionnaire and worksheet. A questionnaire is a list of written questions that respondents are asked to answer to get actual information or facts (Putra & Munawwaroh, 2021). This questionnaire helped the researcher to find the difficulties faced by students in reading comprehension. The researcher also conducted worksheets to collect significant data. These tests aimed at knowing the real problem they faced.

3. Results and Discussion

The questionnaire results are arranged in the table below.

NO	QUESTIONS	YES	NO
1	Saya mengalami kesulitan memahami teks bacaan karena tidak memiliki latar belakang pengetahuan tentang teks.	15 75%	5 25%
2	Saya mengalami kesulitan memahami teks bacaan karena menemukan banyak kosakata yang sulit saya pahami.	17 85%	3 15%

3	Saya tidak bisa memahami kalimat- kalimat dalam teks bacaan.	17 85%	3 15%
4	Saya memiliki daya ingat yang lemah saat belajar reading.	10 50%	10 50%
5	Saya sulit memahami isi teks bacaan karena saya tidak memahami generic structure dari teks bacaan.	19 95%	1 5%
6	Fokus saya mudah terpecah saat saya membaca teks terutama English teks.	20 100%	0 0%
7	Saya tidak termotivasi saat membaca terutama dalam membaca teks Bahasa Inggris.	11 55%	9 45%

Source: adapted from Borough, 2007)

The results show that 100% of the students have a lack of attention. Their focus is easily distracted while reading English text. Next, 95% of the students have limited knowledge of the generic structure. They cannot understand the text's meaning because they did not know how to translate it grammatically. After that, 85% of the students faced difficulties in extracting the text's meaning due to a lack of vocabulary mastery. They get a lot of unfamiliar words in the texts. Then, 75% of the students find obstacles in understanding the meaning of the text because they had no background knowledge about the text's topic. There are 55% of the students were unmotivated in reading, especially English texts. 50% of the students have limited working memories.

This research stood out by not only identifying students' self-reported difficulties, but also by tracing these challenges directly through their actual worksheet responses. This dual-evidence approach allows a nuanced understanding of reading barriers. The results show how students faced any difficulties in reading as described below.

3.1 Lack of Attention

All the students had problems with their attention while reading a text. The difficulties were described by the student's answers to question number 5.

Question 5: Write three types of fish!

Student 16: *dolPhins, octoPus, starFish and JellyFish*

The student's answer is wrong. It was caused by lack of attention. He does not pay careful attention to the question. Thus, he does not get what the text meant.

Previous research confirms that low sustained attention and frequent mind-wandering are critical barriers to reading comprehension. For instance, Smallwood et al. (2008) demonstrated that even brief episodes of mind-wandering degrade key information recall. In the other case, Stern & Shalev (2013) reported that children and young adults with attention deficits show substantially lower comprehension scores. In line with this, the researcher found that

100% of the students struggled with attention. It demonstrates that attention deficit may be even more pervasive, deserving greater focus in ESP reading intervention.

Unlike this research finding, several prior studies emphasize that vocabulary mastery is the main determinant of reading comprehension rather than attention. A recent literature review concluded that vocabulary knowledge is the key to successful reading and one of the strongest predictors of reading comprehension in EFL contexts (European Proceedings, 2023).

3.2 Knowledge of Generic Structure

Knowledge of the generic structure plays an important role in English learning even in reading, writing, listening, and speaking. It influences how the students understand the material. These students' answers explain their difficulties with English structure.

Question 1: What is the main idea of the passage?

Students 5: liFe about Fish

Question 4: Why are fish called cold-blooded animals?

Student 6: *meaning Their body Temperature Is The same as the environment where They live.*

The answers are almost correct based on the question meant. However, due to the students' limited knowledge of generic structure, their answers are written ungrammatically.

This agrees with Shanahan (2023), who emphasized that syntactic awareness contributes 5–30% of the variance in reading comprehension**,** even after controlling for vocabulary and memory factors. Understanding sentence structures helps students process meaning at both the sentence and discourse levels. Similarly, research by Cain and Oakhill (2014) found that poor syntactic knowledge limits students' ability to extract main ideas and draw inferences. It plays a crucial role in constructing meaning from texts, where limited grammatical knowledge leads to fragmented comprehension.

3.3 Vocabulary

The more vocabulary students know, the easier it will be for them to understnad the text's meaning. 85% of the students have a limited vocabulary stock. Most of the words in the passage are unfamiliar to them. Thus, they were unable to get the point of the questions so they answered them incorrectly.

Question 5: Write three types of fish?

Student 1: *There are <u>theree</u> different classes or types of fish: jawles, <u>cartilaginous</u> and bony.*

Question 9: Why do many fish travel in a group?

Student 5: *In ordet to protect.*

These worksheet results show that the students not only have limited vocabulary mastery, but also have difficulties in writing them correctly. The researcher found so many misspelled words.

This supports the findings of Nguyen and Nation (2011), who argued that unknown vocabulary is the most significant barrier to ESP reading comprehension. Similarly, a study by Ahmad (2016) revealed that students in specialized fields like fisheries and engineering struggle with technical terms and academic vocabulary, which hinders their comprehension. The more words learners know, the more they can understand the text.

3.4 Sentence Comprehension

The questionnaire results showed that 17 students faced problems when they were asked to comprehend the texts. It means that 85% of the students missed one important point of reading.

Question 5: Write three types of fish?

Student 6: *Cartilaginous, and bany.*

Question 10: Which part of fishes' body protects them from predators?

Student 16: *Other Fish are Predators when they eat other Fish and animals of Course, Fish kePt at home in a tank care usully given Flakes oF SPecial Fish Food to eat.*

The students' responses showed the problems. Their answers are not relevant to the question's meaning. This aligns with previous studies, which emphasized that sentence comprehension is a critical intermediate step between word recognition and discourse comprehension. Perfetti and Stafura (2014) explained that syntactic parsing allows readers to connect ideas logically, while poor sentence-level processing leads to misinterpretation of the text. Students who struggle with sentence-level processing often fail to integrate meaning across larger units of text, resulting in fragmented understanding.

3.5 Background of Knowledge

Background of knowledge becomes a common difficulty faced by ESP students in reading comprehension. The questionnaire results showed that 75% of the students were unable to comprehend the text because they had no previous knowledge about it.

Question 3: What is the similarity of human and fish?

Student 8: *Your eyes started out on the sides of your head, and your top lip, jaw, and palate begas as gill like structure on your neck.*

Question 1: *Why do fish are called as cold-blood animals?*

Student 17: *Because fish breathe using gills.*

These worksheet results support it. Some students found difficulty when they were asked to write the main idea of the passage. They cannot answer the question correctly because they do not know the text's meaning. This result is supported by Umek (2023), who found that disciplinary background knowledge is a significant predictor of reading comprehension**,** especially in ESP contexts. Similarly, Carrell and Eisterhold's Schema Theory (1983) argues

that readers with relevant prior knowledge comprehend and remember texts more effectively because they can activate existing mental frameworks. They bring background knowledge to the text. Without it, comprehension becomes a word-by-word decoding rather than meaning construction.

3.6 Motivation

Several students were unmotivated in reading, especially English texts. The questionnaire results show that 55% of the students faced it as a problem. The worksheet results described it, where some students did not answer several questions. They were unmotivated to search for the answer in the texts.

This supports Guthrie and Wigfield's (2000) research, which concluded that reading motivation directly influences the use of reading strategies and the depth of comprehension**.** It drives engagement in reading activities. Without it, even students with adequate skills will fail to comprehend. In ESP settings, unmotivated students tend to avoid reading tasks and fail to engage with the texts (Liu & Zhang, 2018).

3.7 Working Memory

Question 3: What is the similarity of human and fish?

Student 4: *Your eyes started out on the sides of your head, and your top lip, jaw, and palate begas as gill like structure on your neck.*

Question 6: What are the characteristics of cartilaginous?

Student 7: *For example, Whales, doLPhins, octoPus Starfhis,*

This finding is consistent with Just and Carpenter's (1992) capacity theory, which explains that working memory limits the amount of information readers can hold and process simultaneously. If working memory is overloaded, students cannot maintain coherence in the text. Daneman and Carpenter (1980) also found a strong correlation between working memory span and reading comprehension performance. It serves as a bottleneck for reading comprehension. Low capacity results in loss of meaning across sentences.

4. Conclusion

Based on the research findings and discussion, the researcher concluded that students of Fish Processing Technology Study Program faced seven difficulties in reading comprehension. The difficulties include attention, knowledge of generic structure, vocabulary, sentence comprehension, background of knowledge, motivation, and working memory. The researcher found that this study contributes a novel perspective, as the results highlighted that attention is the most critical problem faced by 100% of the students in reading comprehension. These conclusions contrast with the results of other previous studies, which demonstrated that vocabulary mastery is the biggest problem.

The researcher is going to apply these research findings as references for the development of the curriculum of the English Language Subject at the Fish Processing Technology Study Program. The results contribute to preparation of effective learning material

design and the determination of appropriate learning methods which are relevant to the characteristics and the needs of the students.

This research was conducted only among students of the Fish Processing Technology Study Program from a single institution. Therefore, the findings may not fully represent ESP students from different programs, academic levels, or institutions. Thus, future studies should involve a larger and more diverse population, including students from other ESP fields.

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