

CHAPTER I

INTRODUCTION

This chapter presents the introduction that consists of the background of the study, statement of the problem, purpose of the study, significance of the study, scope and limitations, and the definition of the key terms.

A. Background of the Study

Nowadays students are required to write and read academic writing, students need to learn scientific terminology to fully understand the concepts, theories, and research findings reported in scholarly journals (Cohen, 2012). Febriana et al., (2018) stated that having been a part of human culture for thousands of years, writing is today more significant than ever. New study findings can be reported in scientific journals with the reliability of the information being supported by pertinent, compelling, and understandable evidence (Marusic, 2009). Based on preliminary research, students may employ a variety of strategies to get beyond these obstacles, including reducing complex concepts into simpler parts, inferring meaning from context cues, using glossaries or dictionaries, and conversing with peers or teachers (Arthur, 2018).

Harmanto et al., (2023) stated that the ultimate purpose of learning is significantly influenced by the attitudes of the students, particularly how they handle reading difficulty. In Porter's (2014) view, a strategy must focus on the right selection, namely choosing to be the best in a particular segment and ignoring other segments that are not under the company's competitive advantage also emphasizes

the importance of efficient and effective resource management to support the implementation of the chosen strategy. Few empirical studies on the efficacy of these techniques and how they affect students' understanding of scientific terms by examining the methods students use to overcome the difficulty of understanding scientific terms in journal articles and their efficacy in raising students' comprehension of scientific terminology, this study tries to close this gap (Patten & Newhart, 2017). According to Mayer (2002), the use of visual aids, such as diagrams and illustrations, can enhance students' comprehension of scientific concepts and terms. Therefore, investigating the use of visual aids as a strategy to overcome the difficulty of understanding scientific terms in journal articles can be a useful contribution to the field of science education.

According to Hattie (2012), an educational researcher, the use of learning strategies can significantly enhance students' academic performance, and investigating the strategies used by students to overcome the difficulty of understanding scientific terms in journal articles is essential for improving students' learning outcomes in science subjects. According to Litcofsky et al., (2015), the comprehension of scientific terms involves not only vocabulary knowledge but also background knowledge and syntactic skills, and investigating the strategies used by students to overcome the difficulty of understanding scientific terms in journal articles can provide insights into the underlying cognitive processes involved in this task.

Scientific terms are commonly found in academic readings, for example, journal articles. According to Lipson (2018), a "journal" is a magazine that

disseminates papers of scientific study that have been peer-reviewed by authorities or authorities in a certain field. Therefore, the purpose of this study is to look into the methods that students employ to get around the challenge of comprehending scientific terms in journal articles (Arthur, 2018). Scientific terms are words used in specific scientific disciplines to clearly and uniformly explain scientific ideas, facts, or principles, using the scientific process, which entails impartially observing, testing, and interpreting evidence to produce knowledge that can be validated in the context of science, a paleontologist and science writer defines "scientific" as this (Stephen 2011). Major & Crystal (1992), in their book, explain if terms are words or expressions that are employed in a certain field or scientific discipline to refer to ideas, things, or activities that have a technical or particular meaning. A lot of students have trouble understanding scientific terminology, which may have an impact on how well they do in classes (Bell et al., 2003).

Overcoming the difficulty of understanding scientific terms in journal articles is a significant endeavor for students. learning context support is very necessary, therefore special tactics are needed to deal with it (Harmanto et al., 2023). Critical thinking, writing skills, learning outcomes, essay writing, reading assessments, teaching materials, the impact of English teaching, are also determining factors in understanding scientific terms in English texts (Lestari, 2024).

Building a solid foundation, developing contextual understanding, utilizing resources, employing effective reading strategies, and engaging in collaborative learning, students can enhance their comprehension and navigate scientific literature more effectively. With perseverance and a proactive approach, students

can develop the necessary skills to excel in their scientific pursuits and contribute to the advancement of knowledge in their respective fields. This research will examine subjects who are students of the 2020 and 2021 classes of Muhammadiyah University of Ponorogo English Education Department of Teacher Training and Education Faculty who have completed the Scientific Writing course.

B. Statement of the Problem

The statement of the problem in this study are:

1. What is the student's strategy in understanding scientific terms in journal articles?
1. What are the students' problems in scientific terms in journal articles?

C. Purpose of the Study

The purpose of this study is:

2. To explore students' strategies for understanding scientific terms in journal articles.
3. To find out what problems students face in understanding scientific terms in journal articles.

D. Significance of the Study

This study is expected to provide a meaningful contribution to the university, students, educators, and other researchers.

1. For the English Students'

Enhancing student's scientific literacy, scientific literacy is crucial for individuals to understand and engage with scientific advancements and research. By investigating the strategies students employ to overcome difficulties in

comprehending scientific terms in journal articles, this study contributes to the development of effective approaches for enhancing scientific literacy among students.

2. For the Educators

Informing pedagogical approaches, the study sheds light on the strategies employed by students when encountering difficulties with scientific terms. The findings can inform educators and curriculum developers in designing instructional materials, teaching methods, and assessment approaches that address these challenges effectively. This research can lead to the development of more learner-centered and inclusive pedagogical approaches.

3. For the other Researchers

Supporting language learning in science, scientific terms often involve specialized language that may pose challenges for students, particularly those whose first language is not English. This study's findings can provide valuable insights for educators working with diverse student populations and contribute to developing strategies that support language learning in science, ensuring equitable access to scientific knowledge.

E. Scope and Limitation

Based on the research background, this research has scope and limitations. The scope of this research is students of the 2020 and 2021 classes of Muhammadiyah University of Ponorogo English Education Department of Teacher Training and Education Faculty who have completed the Scientific Writing course.

F. Definition of Key Terms

Strategies : In the world of education, Wina, (2016) in her books explains that strategy is a plan, method, or set of actions used in the field of education to achieve a specific objective.

Scientific Terms : Scientific terms are specialized vocabulary used within the scientific community to describe concepts, phenomena, processes, theories, and methodologies (Cabr , 1999).

Journal Articles : Journal articles are formal academic papers published in scientific or scholarly journals. They serve as a primary source of research and provide detailed accounts of scientific studies, experiments, methodologies, findings, and analysis. (Thorin, 2006).

