STUDENTS' SKILLS IN WRITING SCIENTIFIC ARTICLES THROUGH DISCOVERY LEARNING: A CASE STUDY AT ENGLISH EDUCATION STUDY PROGRAM OF SRIWIJAYA UNIVERSITY

A Thesis by

ERMA TIARA

Student Number 06011281924023

English Education Study Program

Language and Art Education Department

FACULTY OF TEACHER TRAINING AND EDUCATION

SRIWIJAYA UNIVERSITY

2023

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SRIWIJAYA UNIVERSITY
INDRALAYA
2023

Approved by
Advisor,

Fiftinova, S.S., M.Pd.
NIP. 197911152006042028

Certified by
Head of English Education Study Program

Eryansyah S.Pd., M.A., Ph.D
NIP. 196907181995121001

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Erma Tiara
Student Number: 06011281924023

This thesis was defended by the writer in the final program examination and was approved the examination committee on:

Day : Saturday
Date : May 27 , 2023

1. **Chairperson : Fiftinova, S.S., M.Pd.** ( )
2. **Member : Dedi Kurniawan, S.Pd., M.Pd** ( )

Palembang, May 2023
Certified by,
Coordinator of English Education Study Program,

Eryansyah S.Pd., M.A., Ph.D
NIP. 196907181995121001

DECLARATION OF PLAGIARISM

I, the undersigned,

Name : Erma Tiara

Student's number : 06011281924023

Study Program : English Education

Certify that thesis entitled "Students' Skills In Writing Scientific Articles Through Discovery Learning: A Case Study At English Education Study Program Of Sriwijaya University" is my own work and I did not do any plagiarism or inappropriate quotation against the ethics and rules commended by the Ministry Of Education Of Republic Indonesia Number 19, 2010 regarding plagiarism in higher education. Therefore, I serve to face court if I am found to have plagiarized this work.

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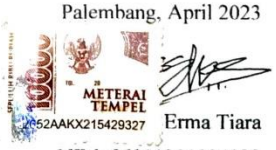

Erma Tiara

NIM: 06011281924023

DEDICATION

This thesis is dedicated to:

My beloved mother and father

My brother and sister

MOTTOS

"Be not afraid of greatness. Some are born great, some achieve greatness, and others have greatness thrust upon them"

-William Shakespeare

"Real leaders must be ready to sacrifice all for the freedom of their people"

-Nelson Mandela

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I hope this thesis will be helpful for readers and future research. But I also realize that this thesis is far from perfect. Therefore, suggestions for improving this thesis are highly appreciated.

Indralaya, April 2023
The Writer,

Erma Tiara
NIM 06011281924023

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STUDENTS' SKILLS IN WRITING SCIENTIFIC ARTICLES THROUGH DISCOVERY LEARNING: A CASE STUDY AT ENGLISH EDUCATION STUDY PROGRAM OF SRIWIJAYA UNIVERSITY

ABSTRACT

The few scientific article publications in Indonesia indicate that writing is the most challenging competency when learning a language. To improve writing skills some researchers have proven that using discovery learning methods can improve the ability to write scientific papers. Therefore this study aims to discover how the ability to write scientific articles of students who are taught using discovery learning in class and how the discovery learning activities facilitate students' writing skills. This study is case study used a qualitative method with documents and interviews as data. This study used a sample of 2019 English education students whose article writing class was taught using the discovery learning method. Four documents were analyzed using the ten aspects in the IMRad rubric from the University Writing Center (UWC). The findings show that the best writing performance of students who were taught using the discovery learning method was shown by students when writing the methods, abstracts, results/analysis, and discussion/arguments sections. Moderate performance is shown by students when compiling scientific articles, using mechanics, using style, and writing references/sources. Last the developing aspect is how the students write introduction. Furthermore, discovery learning discovery learning activities in the learning method facilitate students' cognitive skills in writing abilities. The activities are observing examples of article writing, questions and answers through group discussions, small projects to write articles step by step, activities to compare articles and results of observation as a group, and activities of presenting articles in front of the class in a group.

Keywords: *Students writing skills, Scientific Article, Discovery Learning Method, Learning Activities*

A thesis by an English education study program student, faculty o Teacher Training and Education, Sriwijaya University
Name : Erma Tiara
NIM : 06011281924023

Certified by,
Coordinator of Study Program,

Eryansyah S.Pd., M.A., Ph.D
NIP. 196907181995121001

Approved by,
Advisor,

Fiftinova, S.S., M.Pd.
NIP. 197911152006042028

CHAPTER I
INTRODUCTION

This chapter presents (1) Background, (2) The problems of the Study, (3) The Objectives of the Study, and (4) The Significances of the Study.

1.1. Background

Listening, reading, speaking, and writing are the four competencies that learners of the English language have to master in order to learn the language effectively. Listening and reading are examples of receptive skills, which relate to the competence to understand, in contrast to the productive skills of speaking and writing, which refer to the competence to generate. There is a significant gap between the spoken and written English abilities of many students in Indonesia (Ria & Setiawan, 2021). Writing is the skill that is considered to be the most challenging to teach in English lessons (Apsari, 2017; Rao, 2019). This is due to the fact that we are required to accurately transfer what we say into written words based on social functions, language features, and linguistic factors (Sobari & Husnussalam, 2019).

The quantity of scientific articles published in Indonesia is negatively impacted by the country's low literacy rate. According to Hadisaputra et al., (2021), the reason why there are not enough scientific publications is because educators do not spend enough time performing research. Also, according to Lamanauskas (2019), writing scientific articles is surely an inseparable component of academic activity. Researchers are required to produce scientific articles in order to improve their career prospects, to substantiate requests for financing, to justify prior funding allocations, or as a requirement for university qualifications. However, for some students, writing scientific articles is a chore (Wahyuni, 2018). This is due to the fact that it is difficult to choose subjects, organize and develop essays in paragraph form, use proper vocabulary, and write utilizing the mechanisms of the discipline (Nagari & Nugraha, 2020).

Evaluating the scientific writing skills of Indonesian students, scholars have analyzed students' scientific articles. Abbas and Herdi (2018) examined the ability of fifth-semester English Education Study Program FKIP UNILAK students to compose argumentative essays. According to research, the ability to compose argumentative essays falls into the "good" category, as shown by a mean calculation of 78.1%. In addition, the finding was bolstered by the findings of the interviews, which demonstrated that the students who claimed to be able to write essays well were highly capable and knew how to write essays. Ability to use theory or literary elements such as Unity, Coherence, Cohesion, and Word Usage is in question. Then, Karyadi and Aswin (2019) did research on the ability of natural sciences master's students to write scientific papers. The purpose of the research is to describe the ability for writing field study results in the Panjang beach TWA region. The scientific report's title, introduction, method, results, discussion, conclusion, and list of references are evaluated for quality. The study's findings indicate that the ability to create reports falls within the category of "good." In addition, Angga et al., (2020) investigated the ability of English undergraduates at FKIP, Islamic University of Kalimantan, MAB to produce scientific papers. This study focuses on examining students' difficulties with writing scientific articles in English and identifying the contributing factors. The result showed that undergraduates at Uniska continue to struggle with producing scientific papers. Errors in the use of grammatical components comprise the majority of students' challenges. From the application of simple grammatical elements to the application of complicated grammatical elements, the types of challenges encountered change considerably. The next challenge is the usage of cohesion and coherence elements, mechanical components, and word choice.

These studies show that despite the fact that students continue to encounter difficulties when writing scientific papers, their writing abilities remain within the category of "good." Even though scientific writing skills are in the good category, there is still room for improvement; one way to do so is to teach scientific writing through discovery learning method. Discovery learning is an inquiry-based, constructivist learning theory that occurs in problem-solving environments in

which the learner draws on his or her own prior experience and existing knowledge to identify facts and connections and new truths to be learnt (Bruner, 1961; Kirschner et al., 2006; Schunk, 2012).

Numerous scholars have conducted studies demonstrating that discovery learning can improve writing skills. First, research by Dewi and Silva (2018), on the application of discovery learning methods to the ability to produce expository texts of X IPS 1 students at SMA Negeri 1 Batujaya revealed that the students' abilities prior to using the discovery learning method (control class) were rated as "poor" with an average score of 38.98. In the interval, students' use of the discovery learning technique (experimental class) grew by an average of 74.91 points. In addition, the T-test yielded a sig (2-tailed) value of 0.000, which is equal to 0.05. Consequently, the application of discovery learning to the process of composing anecdotal writings can improve student learning results. Purnamasari and Argawati (2020) also did study on the application of the discovery learning approach to the ability of tenth-grade SMAN Ngrampah students to produce descriptive compositions, demonstrating that the discovery learning method was suitable for the learning process. In addition, the researcher explained that, as a result of their own quest for solutions, students become more engaged when responding to questions about the instructor's descriptive writings. The application of discovery learning methodologies to writing skills proved conclusively beneficial. It adds to the improvement of students' writing.

From the explanation, the writer decided to conduct this study to find out college students' ability to write scientific articles. The writer chose English education students because they had been taught to use discovery learning when learning to write scientific articles. The results of research using discovery learning are proven to improve writing skills. Therefore the writer decided to look further at how the students write abstract, introduction, materials/method, result, and discussion and conclusion in scientific article. The writer also look further how the student manage organization, style and mechanic of scientific article. In addition, this research will also reveal activities in the learning process that can facilitate to practice writing skills.

1.2. The Problems of the Study

a. How do the students' skills in writing scientific articles?
b. What activities in Discovery Learning that facilitate the students' skills in writing scientific article?

1.3. The Objectives of the Study

a. To find out the students' ability in writing scientific articles.
b. To find out the activities in discovery learning that facilitate the students' skills in writing scientific article.

1.4. The Significances of the Study

The writer expects that the results of the study can contribute to the teaching and learning of English and is expected to contribute some support to the teaching of scientific article writing and provide an overview of the ability to write scientific papers for English students.

Apart from the theoretical benefits, the writer also expected that the results of this study could become learning material and reflection for student in scientific writing. Furthermore, the writer also hopes that the results of this research can help the teacher to choose or apply the right teaching and learning method in the writing class.

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