CHAPTER I

BACKGROUND

This chapter discussed the background of the study, problem identification, the purposes, the research question, significance, and the scope of the study.

1.1. Background of The Study

Recently, there had been a growing awareness that ICT tools could provide numerous educational benefits, particularly in writing (Alkamel & Chouthaiwale, 2018). One of the ICT tools that been used was automated writing evaluation (Nur Faradhibah et al., 2018). According to (Siahaan, 2020) technology facilitated new teaching pedagogies and learning approaches that encourage student participation. Rabah (2015) added that technology was an influential and adaptable learning tool that was required and wanted to face globalization challenges, develop our country's economic status, and stimulate and assist students to learn better. Reviewing to Hockly (2019) several previous studies had demonstrated that automated writing evaluation could be an effective learning tool for academic writing, and employed the developed system to evaluate writings.

In addition, automated writing evaluation employed an artificial intelligence developed through computational linguistics to evaluate and score the writing submitted to the program (Wilson & Czik, 2016). Automated writing evaluation analyzed the writing on lexical, syntactic, discourse, and grammar levels and provided diagnostic feedback and correction to preview the writing evaluation

result generated by the system (Nova, 2018). It also saved time when evaluating and assessing writings (Roscoe et al., 2017).

However, little information was known about how to optimize automated writing evaluation to assist students in mechanical engineering vocational education overcome academic writing difficulties (Wang & Li, 2019). There were numerous reasons why it was crucial to investigate this problem. Automated writing evaluation facilitated the teaching and learning of writing by allowing for a range of interactions between technology, students, teachers, and peers. (Wilson & Roscoe, 2020). For instance, automated writing evaluation included students' direct use of the system to plan, built, receive automated scores and feedback, revised their work, and enhanced their writing (Li et al., 2015).

Automated writing evaluation acclaimed help students' difficulties in writing. First, according to O'Neill & Russell (2019), the use of automated writing evaluation tools believed to be useful assistance in writing. Besides that, the perceptions from the research accepted the feedback which came from them improved the grade of the assignment of the students.

Second, automated writing evaluation allowed learner-teacher interactions by including features that allow students to send messages to their teacher requesting assistance. Teachers were allowed to provide supplemental feedback through in-text and summary comments within the automated writing evaluation tools. (Wilson & Czik, 2016).

Third, some automated writing evaluations facilitated peer evaluation, thus also enabling peer interactions Wilson & Roscoe (2020). These interactions allowed

teachers to implement various evidence-based writing instruction practices, including adult-, peer-, and technology-based feedback Wilson & Roscoe (2020), in addition to formative assessment practices related to diagnostic evaluation and progress monitoring (Graham, Hebert, & Harris, 2015) as cited as Wilson & Roscoe (2020).

Fourth, based on the use of automated writing evaluation in academic writing, the use of automated writing evaluation in writing activities was highly needed. Numerous academic goals requiring writing skills, including reports, assignments, exercises, and theses, must be acknowledged (Ariyanti & Fitriana, 2017). However, learning to write, according to Riswanto (2016) was not as natural as learning to speak. Some speakers were able to get away with sparse content by using fluent speech. However, the problem in writing was more complicated than it was in speaking. It had been reported that students with writing difficulties struggle not only with spelling and letter formation but also with "generating ideas" for writing, which could lead to negative thoughts about the actual writing.

Fifth, related to students' difficulties in writing, some researchers found students' difficulties in writing. One of them was Sulistyaningrum & Avianka (2021) that the vast majority of students believed academic writing to be extremely challenging in terms of grammar, vocabulary, and expressions in that order. Ariyanti & Fitriana (2017) added three types of major problems encountered by students: grammatical, punctuation, and spelling issues. According to the findings, there were several factors that contribute to students' weaknesses in essay writing based on a record of their perspectives.

Some of the research was also conducted to solve many of the problems encountered by EFL (English as Foreign Language) students when writing essays. Previous Research had found the same problems in academic writing, which was in the grammar aspect (Harris et al., 2014). In addition to Rahmatunisa (2014) also discovered that EFL college students encounter linguistic difficulties in their written work. Such as grammatical structure, word formation, word category, error spelling, and the use of articles. In that case, students needed tools to employ them facing their difficulties in writing activities such as using automated writing evaluation and machine translator. One of the most popular automated writing evaluation tools that have been used was Grammarly (O'Neill & Russell, 2019).

However, numerous researchers had been conducted studies on the use of automated writing evaluation that have primarily focused on English, writing, and reading rather than writing difficulties, it could be seen one of them from the research of Paskal et al. (2015). Only limited research appeared interested in employing automated writing evaluation to assist mechanical engineering vocational education students with academic writing difficulties, for example from the previous research by Wang & Li (2019). Consequently, this gap prompted the researcher to conduct the present study.

1.2. Research Questions

How do the automated writing evaluation tools overcome students' difficulties in academic writing?

1.3. Purpose of the study

The purpose of this study was to analyze how an automated writing evaluation tool may employ students' difficulties in Mechanical Engineering Vocational Education of Universitas Negeri Jakarta who struggle with academic writing.

1.4. Scope of the study

The research was carried out focusing on discovering the employment of automated writing evaluation to overcome students' difficulties in academic writing. This research employed qualitative survey techniques with descriptive analysis. The researchers distributed the questionnaire to collect data, and the qualitative research did not attempt to generalize its findings because it was conducted only with Mechanical Engineering Vocational Education students taking an English class at Universitas Negeri Jakarta in the second semester.

1.5. Significance of the study

This study was conducted to provide theoretical and practical benefits. Theoretically, the results of this study could provide useful information for other researchers interested in conducting additional studies in this field. Practically, this study could provide both readers and researchers with a deeper understanding of how the Automated Writing Evaluation tool could help students overcome their writing difficulties.