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By Universitas Muhammadiyah Sidoarjo

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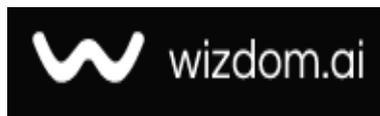## Check this article update (crossmark)

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The Effect of Using Grammarly Apps on High School Students in Writing Recount Text Achievement: Pengaruh Penggunaan Aplikasi Grammarly terhadap Prestasi Menulis Teks Narasi Siswa Sekolah Menengah Atas

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Abstract

General Background The integration of digital and artificial intelligence technologies has become increasingly prominent in English language education, particularly to support writing development among learners of English as a Foreign Language. **Specific Background** Writing recount texts requires accurate grammar control, especially the simple past tense, which remains a persistent difficulty for vocational high school students. **Knowledge Gap** While previous studies on Grammarly mainly focus on senior high schools and universities, evidence from vocational school contexts is still limited. **Aims** This study aimed to examine whether the use of the Grammarly application contributes to students' achievement in writing recount texts. **Results** Using a quasi-experimental pre-test–post-test control group design with 28 students in each group, the experimental class obtained a higher post-test mean score (87.86) than the control class (80.54), with a statistically significant difference (t = 3.337, p = 0.002), alongside a positive gain score and reduced score dispersion. **Novelty** The study provides empirical data from an underrepresented vocational education setting and demonstrates structured integration of automated feedback with guided revision practices. **Implications** The findings indicate that AI-based proofreading tools can be systematically incorporated into EFL writing instruction to support grammatical accuracy and more consistent learner performance

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Keywords : Grammarly, Recount Text Writing, Vocational EFL Students, Grammar Accuracy, Quasi Experimental Design

Key Findings Highlights:

1. Experimental group obtained higher mean outcomes than the conventional class

2. Score variation decreased indicating more uniform learner progress

3. Automated feedback combined with revision practice supported error correction

Introduction

This increasingly advanced digital era is changing the paradigm of the industry by combining digital and physical technologies to create something more efficient, flexible, and connected. The digital society is becoming more current and is connecting individuals globally with a broader vision [1]. Almost all aspects of human life must coexist with technology, humans are also required to be more advanced by utilizing physical and non-physical technology. Digitalization in this era is called the Industrial Revolution 4.0. The digital revolution and technological advancements have changed the framework of the education system. Now, the time has come to bring education into the 21st century. Innovative technology has presented smart media, thus revolutionizing the education system from Education 3.0 to Education 4.0 [1]. Educational technology also has a great influence on the lives of millennials. It will be very helpful and easy to understand as an innovative learning medium that makes it easier for them to find various sources of knowledge easily and can be done at any time [2].

Artificial Intelligence (AI) plays a transformative role in improving the writing skills of students learning English as a Foreign Language (EFL). By integrating AI devices into the writing process, educators can provide personalized feedback and improve writing mechanisms [3]. The development of AI artificial intelligence technology has brought significant changes in various fields, including education. One popular AI app is Grammarly, a writing tool that can help users fix grammatical errors, sentence structure, and word selection [4].

In the increasingly advanced digital era, the most important skill is writing skills. Especially in everyday life. In other words, writing is a skill that is needed in any context [5]. Especially in the context of education, writing skills are indispensable. Writing is a language skill in building ideas in each paragraph well and skillfully using language structure and vocabulary[6]. In writing, grammar is very important because it is a component of language that allows a person to express ideas, opinions, and feelings, both orally and in writing [7]. Therefore, the grammatical aspect of writing cannot be eliminated. English has Tenses to signify time while Indonesian does not have a grammar that describes kala. With the existence of Tenses, English sentences can be known and determined when the time of the event occurred.

In this case, it can be seen from the English sentence: I Bought some tomatoes last night in this example, grammar in English changes the form of the verb to a past sentence marker. Meanwhile, in Indonesian, the grammatical system has not changed. However, not a few students make mistakes and have difficulties in making English sentences, especially in making text recount essays. Many make mistakes in verb changes. For example, I buy an apple yesterday, the student made a mistake in using the first form of the verb, which means present, which is the simple present tense which should use the second form of the verb (past) [8].

In this case, state high school students were also found to have made many mistakes, such as in grammar, which is often done in the form of verbs. This error generally occurs in choosing and using the verb form that corresponds to the time or tense in question. One of the best solutions offered by technological developments is the existence of writing aids such as Grammarly. With the help of tools like Grammarly, students can get detailed feedback and suggestions to improve their writing style. According to Ghufron, Grammarly is an online proofreading site that can be used to transfer documents or sentences to reduce writing errors in terms of vocabulary, grammar, and mechanics [9]. Automatically identifies writing errors such as grammatical errors, word choices, spelling errors, and punctuation. Therefore, Grammarly can contribute to English writing training and check writing automatically and quickly. The work will help educators check students' writing skills more.

The Grammarly app has two versions, the Free and the premium versions. The free version of Grammarly focuses only on style features, Grammarly features, spelling features, and punctuation features. While the premium version provides more complete features than the free version, users have to pay to become a customer. In the premium version, it is possible to investigate the level of formality of the word selection. In this case, there is also a lengthy explanation of any grammatical errors. In this study, Grammarly used is the free version of Grammarly because it is easily accessible and easy to use for all students in vocational high schools [10].

Several studies that researchers found shown the benefits of Grammarly in learning to write. Grammarly is more effective than teacher feedback in reducing grammatical, vocabulary, and mechanical writing errors [11]. Students have a positive perception of Grammarly despite the limited free version . Grammarly Apps improves the quality of descriptive writing [12], while the other article shows that EFL teachers consider Grammarly to be efficient in assessing students' writing [13].

Most previous studies investigating the use of Grammarly have been conducted at the senior high school (SMA) level, such as in Central Java, West Java, and Jakarta, focusing on descriptive or analytical exposition texts. For example, the study at SMA Negeri 1 Lau Baleng revealed that Grammarly effectively reduces grammatical errors and improves sentence structure in students' writing [14], while Tambunan's research showed that Grammarly significantly enhances academic writing quality at the university level [15] However, studies targeting SMK students are still rare, this is also supported by Putri Maulidina & Wibowo, who reported positive outcomes from implementing Grammarly at SMK Bakti Mandiri, although such research remains rare in vocational education settings [16].

To address this gap, the present study was conducted at SMK Negeri Sidoarjo in East Java. SMA and university students have frequently been the subject of Grammarly-related studies, while vocational high schools remain underexplored. This study aims to examine whether Grammarly is also effective in supporting recount text writing among vocational students, who typically face unique challenges in grammar mastery particularly in the use of simple past tense and often require more practical language applications in real-world contexts.

During the pre-observation phase, the researchers observed students' interactions with the Grammarly app, including how they used the available features and the impact the app had on their writing process. This observation also included informal interviews with students and one of the English teachers. Interviews with students aim to explore their views on the use of Grammarly, while interviews with teachers are intended to obtain data regarding the difficulties students experience in writing representational texts.

In contrast, this study investigates Grammarly's effect in a vocational high school (SMK) in Sidoarjo, focusing specifically on recount text writing. Vocational students often face challenges in mastering grammar for narrative tasks, especially in using the simple past tense correctly. Since Grammarly provides real-time grammatical correction, this study aims to fill the gap by examining whether the app can serve as an effective writing support tool in vocational classroom settings that differ significantly from general education environments.

1. Research question:
   - Is there a significant effect of using the Grammarly application on students' achievements in writing recount texts?

Method

Research design

This research was carried out using a Quasi-Experimental Design. The pre-test control group design was the most commonly used experimental research design [11]. Experimental research methods were employed to discover the effects of a particular treatment under controlled conditions. The purpose of the study was to find a causal relationship. In this study, two groups were formed: the experimental class and the control class [12]. The researchers gave the same materials and tasks to both classes during the pre-test, but the experimental class received different treatment during the post-test. The Grammarly application was used as a means to teach the experimental class how to write recount texts well.

Participant

The students of a State Vocational School in Sidoarjo were the subjects of this study. The researchers selected two classes, X BD 1 and X BD 2, as the research sample. Each class consisted of 38 students. The decision to assign X BD 1 as the experimental group and X BD 2 as the control group was made based on careful consideration of several factors. These factors included the equality of academic abilities among students in both classes, which was confirmed through assessments and suggestions from their homeroom teachers.

Both groups were given a pre-test to measure their initial abilities, with 38 students participating in each class. However, during the post-test, the number of participants in the experimental class decreased to 28 students. This was due to a volunteer work program at a department store that some students from class X BD 1 were required to join at the end of March, which coincided with the researcher's data collection period.

As a result, the final data used in this study involved only 28 participants from each group (experimental and control class). The experimental group received treatment in the form of writing practice and corrections using the Grammarly application, while the control group received conventional instruction from the teacher. Conventional instruction refers to the standard teaching method commonly used in the classroom, which includes direct explanation from the teacher about recount text structure and grammar rules, followed by writing practice and teacher-provided feedback without the aid of any digital tools or grammar-checking applications. This method relies on manual correction by the teacher and traditional learning materials such as textbooks and worksheets. In the final stage, both groups were given a post-test to evaluate the differences in learning outcomes after the treatment.

Research Instrument

In collecting the data, the researchers used a test to measure students' writing achievement before and after the treatment. Testing techniques played a central role in the data collection process. In this study, the researchers used two types of tests: a pre-test and a post-test.

The pre-test was administered prior to the treatment to assess the students' initial writing abilities. Following the pre-test, the researchers conducted writing instruction as treatment for both the control and experimental groups, with different approaches for each.

After the treatment phase, a post-test was administered. Students were asked to complete the test individually, which involved a writing task aimed at measuring their writing proficiency. The post-test served to identify the differences in students' learning outcomes after receiving the treatment.

This research was conducted at one of the vocational schools in Sidoarjo. This study aims to analyze the prevalence of the use of the Grammarly application on the ability to write Recount texts of vocational school students. The method used in this study is quasi-experimental with pre-test and post-test designs. This study involved two groups, namely the experimental class and the control class.

The experiment class is given treatment using the Grammarly application, while the control class still uses conventional methods in learning to write. Treatment was carried out in two meetings that lasted for two weeks. In the first meeting, students in the experiment class were first given the recount text, including its definition, structure, and characteristics. After understanding the basic material, they are then introduced to the main features of the Grammarly application, such as grammar checks, spell checks, and suggestions for improvements in sentence structure. Students are then asked to write a recount text without the help of Grammarly as a first step to identify common mistakes they make frequently. After that, they are directed to use Grammarly in evaluating the text they have written so that they can see the corrections and suggestions provided by the application.

In the second meeting, students are given the task of writing different recount texts with the help of Grammarly from the beginning. They were asked to compile the recount text independently and then use Grammarly to correct errors in their writing. After making improvements based on suggestions from Grammarly, students collect the final results of their writing.

Meanwhile, the control class follows the conventional method of learning to write without using Grammarly. They only rely on feedback from teachers in correcting errors in the recount text they make.

After the two meetings were over, a post-test was carried out to measure the development of students' writing skills. The data obtained from the pre-test and post-test were then analyzed using SPSS with an independent Sample T-Test to find out if there was a significant difference between the experimental class and the control class.

With this research, it is hoped that the use of the Grammarly application can make a positive contribution to improving students' writing skills, especially in writing recount texts. In addition, this research also provides insight for educators in utilizing technology as a tool in learning English.

1. Pre-Test Writing Instruction:
   ◦ Read the question carefully
   ◦ Write a recount text based on a personal experience you have had
   ◦ Your writing should have 3 paragraphs.
     ▪ Paragraph 1: Introduction (what, where, when, who)
     ▪ Paragraph 2: Event (what happened in order)
     ▪ Paragraph 3: Conclusion (how you felt or what you learned)
   ◦ Use simple past tense to tell your story
   ◦ Write clearly and use good grammar.
   ◦ Time allocation for this task was 40 minutes. Topic: "A Funny Thing That Happened to Me"
2. Treatment
3. Post-Test Instruction:
   ◦ Read the question carefully
   ◦ Write a recount text based on personal experience (e.g., a memorable trip, an important event, or a family gathering)
   ◦ Your writing should have 3 paragraph
     ▪ Paragraph 1: Introduction (what, where, when, who)
     ▪ Paragraph 2: Event (what happened in order)
     ▪ Paragraph 3: Conclusion (how you felt or what you learned)
   ◦ Those in the control class should write the text on paper without using Grammarly.
   ◦ Write clearly and use good grammar.
   ◦ Time allocation for this task was 40 minutes. Topic: "An Important Event It Happen To Me"

Data analysis

In this study, the researchers adopted two aspects from Dewi's assessment rubric, namely grammar and mechanics, to evaluate students' writing scores [17]. These aspects were selected because the focus of this study was on the accuracy of students' writing in terms of grammar and writing mechanics.

Grammar refers to the foundation of both spoken and written language, ensuring clarity and coherence. Meanwhile, writing mechanics involve the correct use of capital letters, punctuation marks, and spelling conventions.

The assessment rubric used in this study is presented as follows:

Grammar

Score	Indicator
5 (Very Good)	No errors, full control over complex structures
4 (Good)	Almost no errors, good structure control
3 (Average)	There are few faults and pretty good structure control
2 (Bad)	Lots of errors, poor structure control
1 (Very Bad)	Dominated by errors, there is no control over the structure

Table 1. Grammar Assessment Rubric

Writing Mechanics

Aspects	Score	Indicator
Spelling	- 5 (Very Good) - 4 (Good) - 3 (Installments) - 2 (Bad) - 1 (Very Bad)	- Spell mastery - Some spelling mistakes - Quite a lot of spelling mistakes - Frequent spelling mistakes - No control over spelling
Punctuation	- 5 (Very Good) - 4 (Good) - 3 (Installments) - 2 (Bad) - 1 (Very Bad)	- Punctuation Mastery - Some errors in Reading marks - Quite a lot of punctuation errors - Frequent spelling mistakes - No control over punctuation
Capitalization	- 5 (Very Good) - 4 (Good) - 3 (Installments) - 2 (Bad) - 1 (Very Bad)	- Capitalization control - Some mistakes in capitalization - Quite a lot of capitalization errors - Frequent capitalization errors - No control over capitalization

Table 2. Writing Mechanics Assessment Rubric

Figure 1.

SCORE = The number gotten x 100 = 100 The maximal score20

The pre-test and post-test writing tasks were independently created by the researchers and required validation to ensure their appropriateness for assessing students' writing performance. These tasks were not adopted from existing instruments but were constructed based on the learning objectives and recount text structure suitable for vocational high school students. Therefore, validity and reliability tests were necessary in this research to determine whether the tests given to students were valid and reliable. This study employed content validity, which refers to the extent to which the assessment tool adequately covers the scope of the research topic.

The instruments were then validated by two experts: an English teacher at the school and a university lecturer specializing in English language teaching. To support the validation process, the researchers provided both experts with relevant documents, including the lesson module, instructional materials, and drafts of the pre-test and post-test tasks. Additionally, a validation sheet containing specific criteria was used by the validators to evaluate the content. Revisions based on the validators' feedback were made to enhance clarity, topic suitability, and alignment with the study objectives, particularly in assessing grammar accuracy and writing mechanics.This procedure aligns with the principle, as outlined in Ary et al, that content validity should be established through expert judgment. According to them, researchers should provide validators with contextual materials to ensure the instrument reflects the intended construct, and revise the instrument based on expert input to improve its relevance, clarity, and consistency with the learning objectives [18].

The researchers used SPSS to analyze the data in order to determine the significant influence on students' writing scores between those who used the Grammarly Checker and those who did not. The data analysis process consisted of three main components: the normality test, the independent sample t-test, and the descriptive statistical analysis.

1. **R ESULT**

This study aims to test the effectiveness of the use of the Grammarly Application in improving writing skills, especially in writing Recount Texts in vocational school environments. To answer the research question:

3.1 Research question

Isthereasignificanteffectofusingthe Grammarly application onstudents' achievements inwritingrecounttexts? Researchers compared the average pre-test and post-test scores of two groups: the experimental group (which used Grammarly) and the control group (which did not use Grammarly). To analyze the data, an independent sample T-test was used to test whether there was a statistically significant difference between the post-test scores of the experimental group and the control group.

Before conducting the T-test at SPSS, the researchers first conducted a normality test to ensure that the distribution of post-test scores met the normality assumptions. The results of this normality test areshown in figure 1 and table 1.
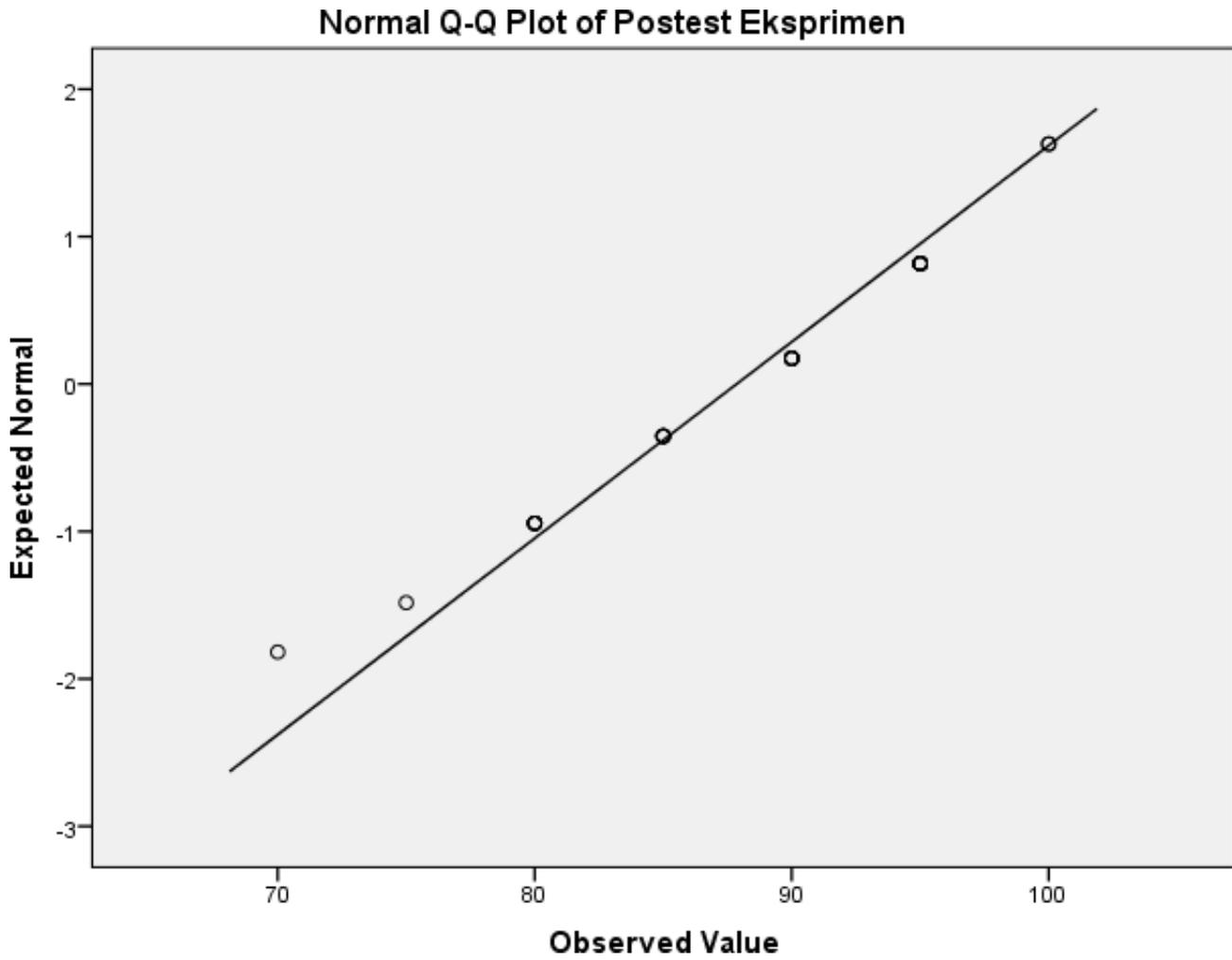

Figure 2. **Figure1**. Q-Q Plot of Normal Distribution of Post-Test Scores in the Experimental Group.

Tests of Normality