THE USE OF GRAMMARLY AS A FEEDBACK TOOL
TO IMPROVE STUDENTS' REPORT TEXT WRITING
AT SMK NEGERI 1 BANDAR LAMPUNG

(Undergraduate Thesis)

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ABSTRACT

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By:

Nirmala Sani

This study aimed to examine the effectiveness of Grammarly as a feedback tool in assisting students to write report texts and to identify which aspects of writing showed the greatest improvement after its implementation. A quantitative approach was applied using a one-group pre-test and post-test design. The participants were 36 eleventh-grade students of class XI TKJT 1 at SMK Negeri 1 Bandar Lampung, selected through cluster random sampling. A report writing test was administered before and after the treatment, and the data were analyzed using a paired sample t-test at the 0.05 significance level. The results indicated a significant improvement in students' report writing skills after the use of Grammarly as a feedback tool. The mean score increased from 57.81 in the pre-test to 79.58 in the post-test, showing a gain of 21.78 points. Statistical analysis revealed that the obtained t-value (34.529) exceeded the t-table value (2.030) with a significance value of $p < 0.001$. Further analysis revealed that the most significant improvement was found in organization, followed by content, vocabulary, and mechanics, while language use showed the lowest proportional gain. Overall, Grammarly functioned as a supportive feedback tool in improving students' report writing skills, particularly by helping students organize ideas more systematically and identify grammatical and mechanical errors during the revision process when used together with teacher feedback.

Keywords: *Automated feedback, EFL students, Grammarly, report text, writing skills.*

ABSTRAK

**PENGGUNAAN GRAMMARLY SEBAGAI ALAT UMPAN BALIK
UNTUK MENINGKATKAN KEMAMPUAN MENULIS TEKS LAPORAN
SISWA DI SMK NEGERI 1 BANDAR LAMPUNG**

Oleh:

Nirmala Sani

Penelitian ini bertujuan untuk mengkaji efektivitas Grammarly sebagai alat umpan balik dalam membantu siswa menulis teks laporan serta untuk mengidentifikasi aspek penulisan mana yang menunjukkan peningkatan paling besar setelah penerapannya. Pendekatan kuantitatif diterapkan dengan menggunakan desain one-group pre-test dan post-test. Partisipan penelitian ini adalah 36 siswa kelas XI TKJT 1 di SMK Negeri 1 Bandar Lampung yang dipilih melalui teknik cluster random sampling. Tes menulis laporan diberikan sebelum dan sesudah perlakuan, dan data dianalisis menggunakan uji t berpasangan pada taraf signifikansi 0,05. Hasil penelitian menunjukkan adanya peningkatan yang signifikan dalam kemampuan menulis teks laporan siswa setelah penggunaan Grammarly sebagai alat umpan balik. Nilai rata-rata meningkat dari 57,81 pada pre-test menjadi 79,58 pada post-test, yang menunjukkan peningkatan sebesar 21,78 poin. Analisis statistik menunjukkan bahwa nilai t hitung (34,529) lebih besar daripada nilai t tabel (2,030) dengan nilai signifikansi $p < 0,001$. Analisis lebih lanjut menunjukkan bahwa peningkatan paling signifikan terdapat pada aspek organisasi, diikuti oleh konten, kosakata, dan mekanik, sementara penggunaan bahasa menunjukkan peningkatan proporsional yang paling rendah. Secara keseluruhan, Grammarly berfungsi sebagai alat umpan balik yang mendukung dalam meningkatkan kemampuan menulis teks laporan siswa, khususnya dalam membantu siswa mengorganisasi ide secara lebih sistematis serta mengidentifikasi kesalahan gramatikal dan mekanik selama proses revisi ketika digunakan bersama dengan umpan balik dari guru.

Kata kunci: *Umpan balik otomatis, siswa EFL, Grammarly, teks laporan, kemampuan menulis.*

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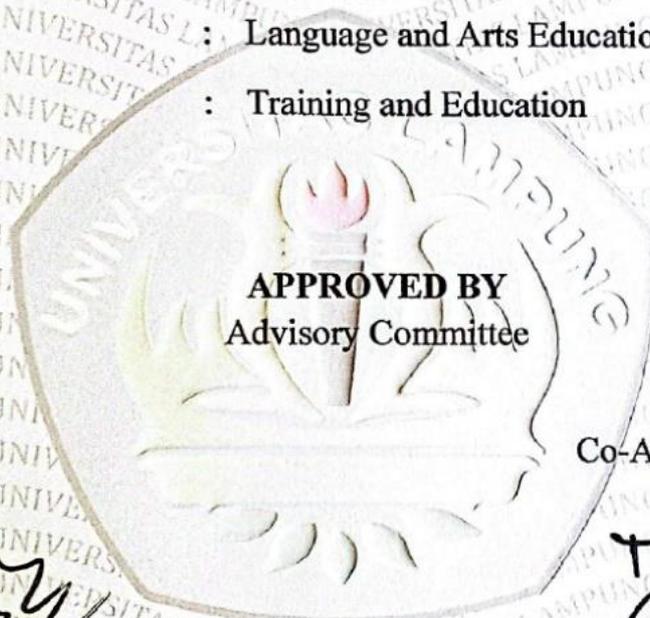
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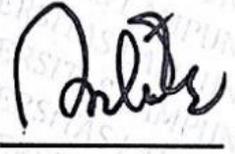**Dr. Sumarti, S.Pd., M.Hum.**
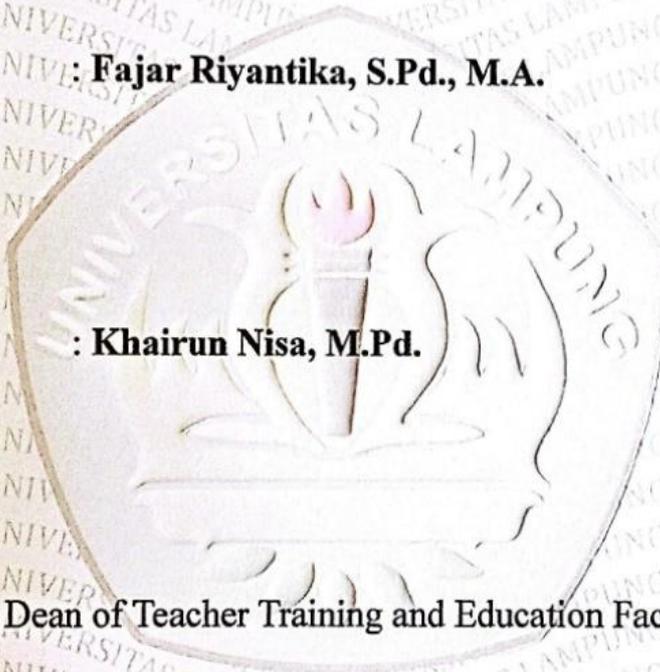NIP 19700318 199403 2 002
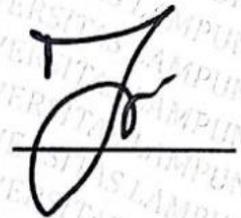
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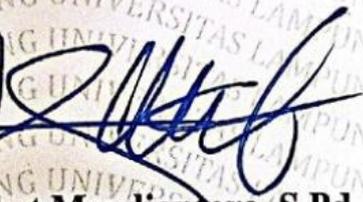   Examiner : **Fajar Riyantika, S.Pd., M.A.**

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Judul Skripsi : The Use of Grammarly as a Feedback Tool to Improve Students' Report Text Writing at SMK Negeri 1 Bandar Lampung

Menyatakan bahwa skripsi ini adalah karya dari pelaksanaan penelitian saya sendiri. Sepanjang pengetahuan saya, karya ini tidak berisi materi yang ditulis orang lain, kecuali bagian-bagian tertentu yang saya gunakan sebagai acuan. Apabila ternyata terbukti bahwa pernyataan ini tidak benar, maka hal tersebut sepenuhnya tanggung jawab saya.

Bandar Lampung, 23 Februari 2026

Yang membuat pernyataan,

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CURRICULUM VITAE

The author's name is Nirmala Sani. She was born in Kotabumi on October 2nd, 2004. She is the second child of three siblings of Mr. Saleh and Mrs. Erma Suryani. She has an older sister named Melysa Saleh, S.Si. and a younger sister named Tri Febriyanti.

Her formal education began at SDN 1 Kotabumi Udik, from which she graduated in 2016. She then continued her study at SMP Negeri 2 Kotabumi and graduated in 2019. After that, she pursued her secondary education at SMK Negeri 1 Kotabumi, majoring in Office Automation and Governance (Otomatisasi dan Tata Kelola Perkantoran/OTKP), and completed her study in 2022.

In 2022, she was accepted as a student of the English Education Study Program, Faculty of Teacher Training and Education, University of Lampung, through the SBMPTN admission test. During her undergraduate study, she was involved in student organization activities as a member of the Society of English Education Department Students (SEEDS) for one period, serving in the Public Relations Division.

As part of the academic requirements of the university, she participated in the Teaching Practice Program (PLP) and the Community Service Program (KKN), which were conducted simultaneously for approximately one month. The programs were carried out at SMP Negeri 1 Banjar Baru and Panca Karsa Purna Jaya Village, Tulang Bawang, respectively. In addition, she participated in the Intercultural Virtual Societal Challenge (IVSC), an online academic program that involved collaborative projects with students from the University of Limerick, Ireland and University of Bengkulu, which enhanced her intercultural communication and global collaboration skills.

MOTTO

"The best of people are those who are most beneficial to others."

(Hadith, Ahmad)

DEDICATION

I dedicate this thesis to:

My beloved parents

Mr. Saleh and Mrs. Erma Suryani, for their unconditional love, prayers, patience, and continuous support, both morally and materially.

My beloved siblings

Melysa Saleh, S.Si., and Tri Febriyanti, for their encouragement, understanding, and support throughout my academic journey.

My dearest friend

Jatiana Sela, who has been like a sibling to me, for the sincere support, understanding, and motivation during this journey.

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continued to learn and remain committed to completing the study. This journey has become an important lesson in patience, commitment, and confidence in completing the study.

Finally, the writer sincerely hopes that this thesis will provide a meaningful contribution to English language education, particularly in improving students' report writing skills through the use of Grammarly as a feedback tool.

Bandar Lampung, 23 February 2026
The author,

Nirmala Sani

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I. INTRODUCTION

In this chapter, the researcher presents several main points to discuss the main idea of the research. This chapter consists of several parts including background of the research, research questions, objectives of the research, uses of the research, scope of the research, and definition of terms.

1.1. Background of the Research

Language is the primary means of communication between people, and English has become one of the most widely used international languages, especially in the field of education. Writing is one of the hardest skills to learn for English language learners. In English, there are four skills that students should acquire as they progress through their English language studies: listening, speaking, reading, and writing.

Writing is a complex skill that requires a number of different cognitive and social processes. Nunan (2003) describes writing as a cognitive process that involves the generation and organization of ideas, which is then transformed into a text that can be read and understood. Harmer (2004) also views writing as a process that includes planning, drafting, editing, and final drafting, in which the writer must consider the form and content of the text. Hyland (2003) adds that writing is not simply a linguistic activity, but also a social act that reflects the writer's awareness of the reader, context, and purpose of writing. Writing, as suggested by the authors, is a complex and detailed activity that illustrates the writer's high level of awareness and involvement with the audience. Therefore, writing requires careful attention to linguistic accuracy and logical organization of ideas.

Writing plays a crucial role, yet it is often considered the most challenging skill for learners, especially for second language learners. Richards and Renandya

(2002) state that for EFL students, writing is the most challenging skill to master. This is because it requires the students to simultaneously master other sub-skills that include grammar, vocabulary, content, the organization of the content, and writing mechanics. Silva (1993) mentions that lacking fluency, coherence, and poor lexical choice when writing in a second language results in poor quality writing. There are a number of common issues related to writing, as stated by Byrne (1988, as cited in Pratiwi, 2015), that include a lack of vocabulary, poor and inaccurate grammar, and a lack of motivation or confidence. Challenges such as these, when writing in an academic setting, are often experienced by students.

One common type of text learned in English language teaching is the report text, which is a type of factual text. As described by Gerot and Wignell (1994), report texts provide information regarding the class of objects, events, or phenomena in a systematic and neutral way. Generally, report texts have two main components: the general classification, which is the introduction of the topic, and the description, which outlines the particular features or associated details. In academia, report texts are required to be written in formal, concise, and neutral language. The Indonesian secondary school curriculum states that teaching report texts is aimed at enhancing students' literacy skills, academically speaking, in the organization and systematic presentation of information. Therefore, among the various text types, the ability to construct report texts is a fundamental aspect of enhancing students' academic writing.

Nonetheless, when it comes to writing report texts, it appears that students still face considerable challenges. These challenges are not only related to grammar and vocabulary, but also related to structural and generic elements. Emilia (2011) found that students often confused report texts with descriptive texts. They included a great deal of subjective and emotional commentary and narrative elements, which are inconsistent with the objectivity of report texts. In other words, they are unable to write the basic structure of a report text.

Similar to this view, Utami and Wijayanto (2022) mentioned that students reported issues with organizing ideas chronologically as expected in a report. Some students failed to include important parts, such as a general classification

at the start, and presented as though there was no order to their ideas. There are also responsibility issues. There was some failure with agreements, especially in subject-verb agreements, tenses, and their use was inconsistent. They appeared to use informal, inappropriate language, including the use of first-person pronouns, which is in too great a contrast to the formal, objective style of writing a report. There was also a significant lack of cohesion: students appeared to lack the ability to connect ideas between sentences and paragraphs. Clearer remedial instruction is needed to help students better understand the structure and language features of report texts.

Another study conducted by Dania, Erlina, and Amalia (2024) reported that students experienced difficulties in organizing the generic structure of report texts, including general classification and description. Students often do not understand the difference between report texts and descriptive texts. The study also indicated that students are not able to sufficiently understand the topic to develop and organize ideas logically, and in addition, students' writing often demonstrated a lack of vocabulary, incorrect grammar (especially in the present and past tense), and poor punctuation. These findings indicate that the difficulties students experience when writing report texts are caused by a lack of knowledge concerning the language and the structure of the texts.

The common issues indicate that many learners still lack a strong understanding of report text writing and academic standards. A lack of clarity and formality in presenting ideas occurs because similar writing errors are repeatedly made. Therefore, effective feedback and clear guidance are needed to support writing revision and to help learners understand the rules of academic writing.

On the other hand, teachers, especially with large classes, sometimes take a lot of time providing feedback on students' writing. Feedback may not be quick and detailed to help students improve meaningfully. As previously mentioned, issues could be aided by several digital writing applications. One such AI application is Grammarly, which assists students in writing by providing feedback on grammatical errors, punctuation, sentence structure, word choice, and writing style.

The tool gives explanations and suggestions to help students identify their errors and correct them. O'Neill and Russell (2019) claim that Grammarly can function as a supporting tool in writing learning by offering individual and real-time feedback, consequently helping students become more independent and confident in their use of language. Given that report texts involve accuracy, clear structure, and objectivity, Grammarly has the opportunity to offer specific benefits in supporting students to produce academic writing that matches these standards.

Several previous studies have demonstrated the effectiveness of Grammarly in improving students' writing skills (Karyuatry et al., 2018; Huang, 2020; Fahmi & Rachmijati, 2021; Maulidina & Wibowo, 2022; Tran, 2024). These studies consistently reported improvements in students' grammatical accuracy, vocabulary use, sentence structure, and overall writing quality after using Grammarly. Most of the research employed pre-test and post-test designs or survey-based approaches, and the findings indicated that Grammarly helped reduce grammatical errors, enhance writing accuracy, and increase students' confidence in revising their texts.

However, the majority of these studies focused on general writing skills or specific text types such as descriptive, narrative, or explanatory texts. Very limited research has examined the use of Grammarly in supporting report text writing, which requires objective language, clear structure, and systematic organization. This gap highlights the need to investigate how Grammarly may assist students in developing report texts, particularly when integrated with structured instruction and teacher feedback.

In this case, SMK Negeri 1 Bandar Lampung was selected as the research location because it was appropriate for the purpose of this study. Based on informal interviews with English teachers, report texts are taught in grade 11 as part of the curriculum. However, based on the teachers' teaching experience, many students still struggle to write report texts, especially in the aspects of grammar, organizing ideas, and using the right language features. Besides that, the school has not integrated Grammarly or other automatic writing tools into the learning process, making it the right place to explore the use of Grammarly as a feedback tool in developing writing skills.

Therefore, this study was designed to explore the use of Grammarly as a feedback tool in improving students' report writing skills. Writing is a multidimensional skill with many components. This study aims to identify which aspects of writing are significantly improved through the use of Grammarly, and presents findings that help explain the potential impact of automated feedback on writing in a specific genre, particularly for EFL learners writing reports.

1.2. Research Questions

Considering the background explained above, the researcher formulated the following problems:

1. Is there any improvement in students' report text writing after using Grammarly as a feedback tool?

2. Which aspect of students' report text writing skills show the most improvement after the use of Grammarly as a feedback tool?

1.3. Objectives of the Research

Based on the research question formulated above, the objectives of this research were:

1. To find out whether the use of Grammarly as a feedback tool can improve students' report writing skills.

2. To identify which aspects of students' report text writing skills show the most improvement after the use of Grammarly as a feedback tool.

1.4. Uses of the Research

This research aims to explore the use of technology in teaching writing in theory and in practice by:

1. Theoretically, this study is expected to contribute to existing research on the use of digital feedback tools in writing instruction for English as a Foreign Language (EFL), specifically regarding the application of Grammarly. The results demonstrate not only the advancement of students' writing skills of the report text

as a whole but also which writing aspects improved the most after using Grammarly.

2. Practically, the study aims to provide English teachers with guidance on selecting and using digital feedback tools in writing classes. Because the study identifies the writing aspects most positively influenced by Grammarly, it offers recommendations on using automated feedback together with teacher guidance to improve students' writing.

These objectives support the practice of writing instruction and contribute to research on the use of technology in writing.

1.5. Scope of the Research

This study analyzed the effectiveness of the automated feedback tool Grammarly in writing report texts. The research centered on the students' writing skills improvement before and after Grammarly was implemented, both in terms of overall writing skills and specific writing aspects, including content, organization, language use, vocabulary, and mechanics. Grammarly's feedback was limited to issues of grammar, punctuation, and spelling, as well as recommendations for writing in clearer sentences.

This research used a quantitative method with a one-group pre-test and post-test research design. The research was conducted at a vocational high school in Bandar Lampung and focused on eleventh-grade students as research subjects. The research was also limited to the scope of writing to report texts and excluded other text types, such as descriptive, procedural, or explanatory texts.

1.6. Definition of Terms

To avoid misunderstandings and misinformation, the following definitions clarify some of the most important terms used in this study:

1. Writing

Writing refers to the process of expressing ideas and information in written form. As mentioned by Harmer (2004), writing involves several stages, including

planning, drafting, and final drafting. Writing also involves clear expression, grammatical errors, and a coherent and organized presentation of ideas.

2. Report Text

The report text is a kind of factual text that systematically describes and classifies a certain phenomenon. Gerot and Wignell (1994) describe report texts as consisting of general classifications and descriptions. The purpose is to provide readers with objective information about certain things, whether it be living things, events, or objects. For example, animals, history, or natural phenomena, etc.

3. Grammarly

Grammarly is a digital writing tool powered by artificial intelligence (AI) that offers feedback on issues related to grammar, word choice, sentence structure, and punctuation. O'Neill and Russell (2019) state that Grammarly assists students by identifying errors in writing and providing explanations for those errors to enhance the clarity and accuracy of their writing.

This chapter explains the background of the research, research questions, objectives of the research, uses of the research, scope of the research, and definition of terms. The next chapter will present a review of relevant literature and previous studies that support this research.

II. LITERATURE REVIEW

This chapter provides as a review of relevant literature for this study. It explains what the concept of writing entails, including some of its definitions, components, and issues that students commonly face when writing. It also reviews report texts, their structures, and their linguistic features. It discusses the teaching of report text writing in English, the use of Grammarly as an automated feedback tool, its functionalities, and its use in writing instruction. Additionally, this chapter describes the steps to use Grammarly in writing report texts, its advantages, and disadvantages. Finally, this chapter describes the theoretical assumptions and the research hypothesis.

2.1. Writing

Writing is one of the four basic skills in English language learning, along with listening, speaking, and reading. Writing is often considered the most complicated and challenging skill, especially in the context of EFL. As stated by Nunan (2003), writing is a thinking activity that entails producing and organizing ideas and then transforming them into readable text. This is one of the most complex processes and involves the selection of appropriate vocabulary, correct grammar, proper structuring of the text, and consideration of the reader. This complexity makes it essential to teach writing in a systematic manner with the use of appropriate strategies and a considerable amount of practice, making it an important component of teaching a foreign language.

2.1.1. Definition of Writing

Writing is a complex activity that can be analyzed from different perspectives, including the linguistic, cognitive, and pedagogical perspectives. Writing in English is more than just stringing words together, as it involves a

a number of different individual processes. There are several important, relevant theories that can be of benefit in teaching and supporting writing, in particular, English as a Foreign Language (EFL) teaching.

An example of these theories is Harmer (2004). Harmer views writing as a complex activity that involves planning, drafting, editing, and final drafting. Harmer suggests that writing is best understood as a process involving several stages. This allows for a complex movement from one stage to another in order to improve the quality and complexity of the ideas and the language. For this reason, writers need to revise and receive feedback on their writing in order to help them to organize their ideas in ways that are easy to understand.

Writing is a multifaceted activity, involving a range of linguistic and cognitive skills, and incorporating mechanical, grammatical, and social aspects of language, as well as the context of the communication. In addition, Hyland (2003) comments that most people think of writing as a skill that is primarily mechanical. From Hyland's viewpoint, this encompasses a rather limited scope of what writing involves. He argues that writing, in the form of a social activity, integrates a combination of language and communication because it is aimed at a particular audience and, more importantly, a target reader in a particular social culture through which the message needs to be interpreted and understood. As such, students' need to appreciate the impact of their language choices on the reader's perception of the message involves the integration of the cognitive, social, and affective domains of the writing process.

In this regard, Raimes (1983) also expresses that writing, in her opinion, should be viewed as a process that must include several aspects. For her, writing is a major task that involves skill in the area of language, including grammar, vocabulary, sentence patterns, and structure, as well as the organization and meaning of the text. From this perspective, writing, as a combination of linguistic skills and cognitive control, is the aspect of the process that is most demanding for EFL students, that is, managing both form and meaning in writing.

Byrne (1988) suggests that writing is an act of putting down one's ideas in a written form in an attempt to communicate them to someone else. Writing, as an

act that has both mental and physical dimensions, is a process that requires the writer to think, develop, and structure their ideas in such a way that the end product is meaningful.

Richard and Renandya (2002) argue that writing is the most difficult language skill that EFL learners have to deal with, largely due to the fact that, in addition to having to deal with the mental and linguistic aspects of writing, learners must have the necessary vocabulary. While compared to writing, speaking has the advantage of having an immediate interaction between the participants, writing lacks that advantage. For that reason, the writer has to depend on the readers' understanding of the ideas that have been put down in written form.

From all the perspectives, one can conclude that writing is the most complex act that involves multiple dimensions of the linguistic code, cognitive processing, and social awareness. In foreign language teaching, more so in writing, there has to be a balanced focus on the technique and the communication aspect. A good mixture of both is essential to enable the learners to express themselves in writing in English in a clear, coherent, and accurate manner.

2.1.2. Aspects of Writing

To improve the quality and clarity of writing, it is necessary to analyze the different factors involved. This gives guidance to both students and teachers to know where the problems may exist. One of the more popular models is the one created by Jacobs et al. (1981). They break down writing into five different aspects.

1. Content

The meaning and relevance of the ideas presented in a piece of writing are referred to as content. Content is considered well developed when the writing presents ideas that are clear, original, meaningful, and relevant to the topic. The quality of content can be described in terms of the depth and clarity of the ideas, as well as how well the ideas are developed.

2. Organization

Organization is the logical arrangement of ideas into a text. This component incorporates an introduction, a clear paragraphing and sequencing structure, and smooth transitions between paragraphs. Well-organized writing helps readers follow the flow of the ideas and understand how different parts of the text are connected.

3. Vocabulary

A good text is one that shows a writer's skill through the use of a variety of words in a controlled manner, displaying an elaborate and accurate choice of words. A good selection of words improves the tone and clarity of the writing and the overall effectiveness of communication. On the other hand, a lack of choice of words can lead to unclear and ineffective expression of ideas.

4. Language Use

English writing quality relies on grammar and the construction of sentences. Sentence construction entails the correct use of tenses and clauses, and subject-verb agreement. These aspects of writing improve the level of quality, precision, and clarity of writing.

5. Mechanics

Mechanics refers to the accuracy of technical aspects of writing, such as spelling, punctuation, capitalization, and formatting. Although often considered a minor aspect of writing, mechanics contribute to the professionalism and readability of a written text.

These competences are necessary for the development of writing skills. In an EFL context, understanding the issues is important not only for learners seeking to improve their writing in a more structured manner, but also for teachers, as it provides a framework proposed by Jacobs et al. (1981) is useful for evaluating and guiding the improvement of the students' writing skills.

2.1.3. Students' Writing Difficulties Based on Previous Studies

As a foreign language, English contains a multitude of areas that engage various aspects of EFL learners' cognitive abilities. Writing is often the hardest skill to develop for learners. This can be attributed to the many characteristics involved in the composition process, such as the expression of one's thoughts, the use of appropriate grammar and vocabulary, and so on, which are very difficult for learners to master. This greatly impacts the quality of writing produced in an academic context. This is particularly the case in writing reports and other similar genres of texts. To address such challenges, several studies have focused on particular writing problems that have been commonly articulated by EFL learners.

Ramanda Maharani et al. (2023) looked into the challenges of students in their 6th semester, in particular, the issues they face in writing academic articles. The authors used a qualitative descriptive method with the involvement of 36 students from the English Education Study Programme. Three challenges were identified from the findings of the study: grammar, vocabulary, and the organisation of text. Grammar was considered the most challenging, with about 80.6% of students reporting difficulties with tenses and verbs. Regarding vocabulary, 91.7% of the participants indicated that they experienced problems expressing their ideas due to a lack of vocabulary, and 94.4% of the participants stated that they felt dependent on the use of a dictionary when composing a text. Evidence of problems with the organization and structure of ideas is also found in 33.3% of students who stated that the ideas they expressed in writing were unclear, and 16.7% of students stated that they had problems with the flow of words and sentences. From this, it can be concluded that the students need a great deal of support in writing.

This same pattern applies to Ambarwati and Listyani (2021), where some students experience difficulties during the COVID-19 pandemic while writing procedural essays. The combination of questionnaires and interviews with the 27 participants revealed that students had difficulties with idea construction, word selection, and grammar. 92.6% of the students claimed it was difficult to write about a topic they did not understand, 85.2% claimed it was difficult to write about a topic they disliked. 70.4% of the students claimed that vocabulary was an issue, 77.8%

of the students had issues with word selection. 70.4% claimed that grammar was a big problem. It was a big issue that students lacked the vocabulary and grammar knowledge necessary to support writing improvements.

Bulqiyah et al. (2021) categorized issues in student writing into three dimensions: affective, cognitive, and linguistic. A mixed-method design was employed in the study that involved 21 participants who were 4th semester students. The findings indicated that students showed writing confidence, and this was highest at 52.3%. As for the other participants, 42.9% experienced anxiety, and 38.1% were undetermined. Cognitively, students reported issues with idea generation, with the transfer of ideas from their first language to English, and with the writing process, such as planning and revising. Regarding grammar, 66.7% of participants indicated this was the most critical issue, 52.3% indicated that lexical resources were lacking, and 38.1% indicated a weakness concerning the structure of the essay. The interview also indicated that students need to use prewriting more, and they also had areas of difficulty in writing that were cohesive and coherent, as well as in the elaboration of ideas.

Taking into consideration all of this literature, it is clear that EFL students' writing problems involve complexities beyond basic problems of grammar and vocabulary. Problems of thinking of elaborate ideas, organizing text, and various affective issues are also significant. Such issues relate to this study that examines the employment of Grammarly as a digital writing aid for students in writing report texts. Since report writing is not just a matter of supplying relevant information, but also fulfilling particular requirements of organizational structure and formality of language, it is evident that this study addresses the problems that previous researchers have identified.

2.2. Report Text

In English as a foreign language (EFL) classes, report texts are commonly introduced. Report texts highlight the importance of clear and orderly presentation of information. Unlike narratives and descriptions that may use emotional and subjective language, report texts use a neutral style and aim to present information

without prejudice toward categories, phenomena, events, or objects. These features make report texts different from other types of texts.

2.2.1. Definition of Report Text

Report texts, as a genre of factual information, have been defined in various way by genre-based writing theorists. These definitions can be used to provide a framework for understanding the characteristics and purposes of report texts in the teaching of English as a second language.

As noted by Gerot and Wignell (1994), report texts aim to classify and describe phenomena based on systematic observation and analysis, including natural, social, and artificial phenomena. The authors emphasize that report texts present information objectively without personal judgment or emotive language. As part of the factual genre, report texts enable students to structure and formally express their scientific or general knowledge, thereby supporting the development of academic writing skills.

Factual writing in reports may cover specific branches of science in relation to the general study of science and objects of phenomena (Knapp & Watkins, 2005). They explain that writing begins from the general and moves toward the specific by describing details, functioning attributes, or behavior of the specific object in question. Employment of simple present, generic participants, and describing universal truths are all characteristics of such factual writing. They emphasize the value of reports in helping learners construct and convey information in an organized and precise manner. They additionally explain the differences between reports and descriptive text. Writing that describes objects in detail is descriptive, while writing that generalizes and is more scientific is a report.

On the other hand, Anderson and Anderson (1997) describe the report text genre, explaining that such texts portray and describe a given object and explain to the reader a class of that object. The authors state that the report text's primary social purpose is to provide and systematize information, and that this is often done by sectioning the information and explaining some of the shared characteristics. The text, which has been widely used in the teaching of English in secondary schools,

demonstrates the great importance of this genre in helping students to sharpen their power of observation and analysis. The genre of writing report texts helps students to identify a relevant characteristic, and describe the information they have in a logical and factual manner.

The perspectives presented in these studies affirm that report texts are largely objective and function to explain phenomena through a structured, factual, and systematic presentation of information. Besides helping students improve their writing skills, report texts help students learn to communicate information in a clear, factual, and organized manner.

2.2.2. Generic Structure of Report Text

According to Gerot and Wignell (1994), report texts consist of two main parts: general classification and description. These components offer logical and factual information, enable the writer to describe the subject of the research or observation in a clear and focused manner.

1. General Classification

This part of the text sets the subject and gives it scope. Here, the author defines the phenomenon and the set of objects to be reported, describing it to the level of superficial explanation and classification. For example, in a report on whales, they would be classified with other marine mammals and described at that level.

2. Description

The topic now has the potential to provide details about the subject matter. Depending on what the report is on, it could include details about elements, behaviors, functions, roles, the purpose of the subject, physical characteristics, etc. In most cases, this part is subdivided into several paragraphs, with each focusing on a different aspect. In this case, the scope would be dealing with a whale's anatomy, feeding, habitat, and migratory behavior.

The two elements form a basis for helping both writers and readers recognize and structure factual information. By applying the structures, students are

able to produce report texts that are systematic, coherent, and fulfills the communicative purposes of the genre.

2.2.3. Language Features of Report Text

Gerot and Wignell (1994) identify the linguistic features that distinguish report texts from other text types. These features relate to the central purpose of the report text, which is to provide a description of a particular class of objects in an organized and factual manner. The following features are characteristic of report texts.

1. Generic Participants

In report texts, participants are generalized, instead of specified. Typically, the subject of the description is a class or category, rather than an individual. For example, in place of "My cat likes fish," a report text would write "Cats are carnivorous animals." This is to increase the objectivity of report texts by stating facts about a class rather than sharing a personal experience.

2. Relating Verbs (Relational Processes)

Relational processes are used to express states of being and to describe entities. These processes include the use of is, are, have, belong, consist of, or describe the subject. For example, in writing about reptiles, one may state, "Reptiles are cold-blooded animals" or "Mammals have lungs."

3. Simple Present Tense

Report texts also include the use of the simple present tense. Its function is to present facts irrespective of time, e.g., "Birds lay eggs" or "Water boils at 100 degrees Celcius." These examples illustrate how facts are presented as general truths.

4. Absence of Time Sequence Connectives

In writing report texts, the use of time sequencers such as first, then, next, and finally should be avoided. These words are common in narrative or recount texts, but report texts do not seek to tell a story. The primary aim of report texts is

to give a description and a classification. Eliminating time markers keeps the text focused on the information, not the storyline.

In the end, the text features serve the purpose of report text types by clarifying descriptions of text types of information, which is objective, factual, and clearly explained. Recognizing such linguistic features is quite important, especially during the schooling process, to enable learners to express their observations in an organized and systematic manner.

2.3. Teaching of English Report Writing

Writing, in the context of English as a Foreign Language (EFL), involves a significant aspect of students' ability to express information, ideas, and reasoning in a clear manner. Regarding the teaching of report writing, the aim should be to assist students in developing texts that are objective, factual, and systematically organized. As a factual genre, report texts require the writer to be precise in the use of language as well as in the arrangement of ideas, in an organized manner. Hence, teaching this type of writing involves a combination of genre-based and process-based methodologies, in addition to adequate and constructive feedback and scaffolding.

Completing a writing task means using numerous drafts, each one made from a distinct layer of the writing process. As Harmer (2004) indicates, "these steps are planning, drafting, editing, and final drafting." There should be a focus on the writing process. Students should understand that each text requires refinement, which is an iterative, repetitive, and multi-draft process. This is also true for report writing. Students must offer a well-structured and accurate representation of the information. They must also comply with the standards of using formal and objective language. Harmer also highlights how important the feedback and guidance that teachers give to their students is to help them grow.

Hyland (2003) expands on Harmer's perspective using the genre approach, which emphasizes text types concerning organization, purpose, and important language features. Fact-based reports primarily teach students the generic structure of a report, which starts with a general classification and a detailed description. This

structure requires the use of the simple present, general participants, and relational process verbs. For content and organization, scaffolding strategies like modeling, guided writing, and independent writing are crucial in helping students meet the writing report texts academically standard.

While writing, one must consider cognitive dimensions and pedagogical design because any writing task involves learners in a range of cognitive activities. According to Flower and Hayes (1980), writing is a recursive cognitive process consisting of three main activities: planning, translating, and reviewing. A main coordinator oversees these processes, enabling writers to review and transition between different stages instead of following a straight sequence. This assumes that learners take different routes on a journey, which is not the case for most learners. They describe the writing journey as returning to different locations. This theory suggests that students have to engage with all the phases of the writing process and return to their texts to revise their work to improve clarity and the accuracy of their writing.

This also draws that students need time and help to make revisions to their texts. Raimes (1983) suggests that a lack of a clear understanding of the components of mechanics, content, grammar, vocabulary, and organization may result in an unsuccessful writing process. This is especially applicable to more structurally demanding tasks, like report writing. In order to draft a report, the student must be able to demonstrate knowledge in all the areas that the report requires. This includes the organized use of all of the linguistic elements, as well as all of the various writing components that ought to be fused together.

For L2 learners, the building of writing competence, in particular, is greatly aided by Swain's (1995) Output Hypothesis. It is argued that learners produce language (output). While writing, learners become aware of the gaps that exist in their knowledge. It is through the gathering of feedback that learners become especially aware of their gaps. In addition, writing in particular genres (such as reports) is especially useful in addressing this phenomenon. This exemplifies the rationale for the use of feedback tools such as Grammarly, which help students revise their work in a more autonomous manner.

In conclusion, successful report writing instruction in EFL classrooms needs to combine genre pedagogy, process instruction, cognitive elements, and feedback of the more responsive variety. Teachers, inspired by Harmer, Hyland, Flower & Hayes, Raimes, and Swain, can offer a synthesis that enables students to write accurate and well-organized report texts, supports the development of students as academic writers.

2.4. Grammarly

Due to technological progress, digital resources are being used more frequently in language education, especially in teaching writing. An example of such an application is Grammarly, an automated writing assistant that evaluates and gives feedback in real-time on users' grammar, spelling, punctuation, clarity, and writing style. In EFL (English as a Foreign Language) classrooms, Grammarly is not only a correction tool, but also a learning aid by making students more aware of their writing language and enhancing the precision and quality of their written texts.

Many educational institutions and studies have analyzed the use of Grammarly, the described perspectives are examined in the next section.

2.4.1. Definition of Grammarly

An example of a grammar checker that is available on the online is Grammarly, an AI-based grammar tool, which processes natural language to provide feedback on the user's writing. Grammarly is one of the most popular tools to assist with writing in professional and academic settings. In 2009, Alex Shevchenko and Max Lytvyn, the company's founders, released an initial version to the public. Users receive suggestions after submitting a writing sample, and Grammarly provides feedback that is meant to help the user enhance their writing in a number of areas, including writing, grammar, punctuation, and spelling. In addition to the considerations mentioned above, Grammarly helps users to write more clearly, to use the appropriate tone, to adopt a style, and to write more to suit the preferences of their target audience.

Daniels and Leslie (2015) describe Grammarly as not being a simple proofreader but also as a learning tool because it documents users' mistakes and offers descriptions of them. The feedback is most useful for learners who are beginning to write in English because it helps them notice mistakes in their writing and helps them to use language more thoughtfully.

Students in higher education receive assistance from Grammarly since it provides feedback that O'Neill and Russell (2019) explain they would have to wait to receive from their teachers. O'Neill and Russell say that this feedback motivates students to write more independently and helps them understand their own writing better by identifying recurring mistakes.

Moreover, Nova et al. (2021) mention Grammarly's significance in EFL writing classes where students have problems with grammar and vocabulary. In their study, Grammarly supports students in writing more clearly, cohesively, and at an appropriate level in academic writing by helping them to avoid more superficial writing errors. The researchers also consider Grammarly to be a formative assessment tool in situations where teachers do not provide feedback or do not provide timely feedback.

To conclude, Grammarly is a comprehensive writing tool that offers grammar checking, feedback, and writing suggestions. In many EFL contexts, it is corrective and educative, allowing students to enhance their writing through more effective self-editing. The value of Grammarly in writing pedagogy, especially for learners of English at the developing level, is shown in the growing use of this tool in learning environments.

2.4.2. Features of Grammarly

Grammarly offers users various features to help analyze and refine their writing. These tools use artificial intelligence (AI) and natural language processing (NLP) technologies to analyze users' text and offer real time feedback. According to Grammarly's official documentation (2024), the core features are described as follows:

1. Grammar and Syntax Checking

Identifying and correcting structural and grammatical issues is how Grammarly describes its main activities. These include issues with subject-verb agreement, verb tense shifts, articles, prepositions, sentence fragments, and single-sentence paragraphs, as well as overly long run-on sentences. Users can receive responses to their texts that provide explanations and responses to particular grammar problems, with structural and grammatical problems coded with different colors. When completing assignments, ESL (English as a Second Language) students tend to appreciate feedback on their writing. For ESL students who have limited knowledge of English grammar and structure, and whose sentence construction is often simple, feedback plays an important role in improving their writing skills.

2. Spelling Correction

This feature helps users to find and fix incorrectly spelled words. In addition to a spell checker, Grammarly can identify the correct use of confused words, evaluate word usage, and give contextual suggestions. As a result, students are likely to improve their accuracy in word choice and spelling, which will enhance the precision and clarity of their writing.

3. Punctuation Assistance

The meaning of a sentence can change with the use of different punctuation marks. Grammarly assists with the writing of missing punctuation marks: commas, periods, colons, and apostrophes. A sentence can have a better structure and readability if a missing comma is added. So, Grammarly gives writing suggestions to help students achieve their goal of writing at a higher academic level, with less complicated writing.

4. Clarity and Conciseness Suggestions

In the interest of effective communication, Grammarly, during the writing process, make suggestions that help eliminate redundancy and improve sentence clarity. With its guidance, complex, verbose, or ambiguous writing can be revised into clearer and more concise expressions. For students learning English as a

Foreign Language, these suggestions support the development of direct and precise language use.

5. Vocabulary Enhancement

Grammarly helps users by providing a variety of vocabulary options to eliminate word repetition and adjust language to an appropriate level of context. This feature supports the development of academic writing by assisting users in selecting more precise and suitable vocabulary.

6. Tone Detection

Grammarly describes how the tone might feel using a particular sequence of word structure. It classifies the tone into formal, informal, positive, confident, apologetic, etc., and how to fix that. In a school writing context, the tool tries to help users keep an unbiased tone. This is a great tool for students, who often have a problem aligning their writing with the expected degree of formality and the objective characteristic of academic writing.

7. Sentence Rewriting (AI-Powered Rephrasing)

With recent software updates, Grammarly has significantly improved its sentence construction and fluency features. The tool suggests sentence revisions that enhance clarity, fluency, and tone of sentence, which is especially helpful for students who are still learning English.

8. Plagiarism Detection

Grammarly's plagiarism checker may match the user's text against multiple online sources, including research databases. Grammarly highlights and suggests sources for the user to cite. Instructors care about this because they want their students to write and cite their sources for ideas.

9. Style and Formality Suggestions

Grammarly provides users with feedback on tone and level of formality. It may suggest the user avoid informal writing by making it more formal, by eliminating contractions, adjusting informal language, and making lists with

uniform sentence structures. These features help students become more formal and professional, which is helpful for writing reports, essays, and research papers.

These features do provide some form of documented evidence. As Dewi (2023) discusses, vocabulary and clarity features assist EFL students with their papers. Tools that check for grammar and punctuation signal to Alhabib and Alghammas (2023) that students are making fewer surface-level mistakes. This type of feedback shows that students are not only receiving assistance with error correction, but are also developing self-regulated and independent writing skills.

2.4.3. Grammarly as a Feedback Tool

Effective feedback is vital to the writing improvement process for students. Feedback, as noted by Ellis (2009), is defined as information provided to learners about their writing that is most effective when it guides learners to make their own revisions. Feedback can be in the form of comments from a teacher, responses from peers, or suggestions from a digital tool.

Grammarly is an automated feedback tool that students can use to check their assignments. It provides a feedback mechanism that makes suggestions about grammar, vocabulary, punctuation, clarity, and sentence structure. Because the tool is available during the writing process, students can receive immediate feedback while composing their texts. Students can use the suggestions to rewrite or edit their work more effectively. Revising work is a key factor of the writing process and plays an important role in the development of writing skills.

Focusing on media and tools in the instructional context leads to theoretical perspectives. Instructional media are defined as the physical means or channels of messaging to the learners. These can include print materials, audio or video recordings, and even screen projections (Heinich et al., 2002). On the other hand, tools, as explained by Levy (1997), are resources or applications used by the learners to accomplish tasks. These are usually interactive and are oriented towards the construction of learner output, modification of the output, or evaluation of the output in order to process the language, as opposed to only receiving or consuming the language.

In light of the above definitions, Grammarly functions more as a feedback tool than an instructional medium. It does not have a primary function of instructional content delivery. It provides automated, individualized, and tailored feedback on the writing process of the learners. Grammarly, as a digital tool, encourages autonomy since it allows students to detect and rectify language mistakes as well as understand the reasons behind the language corrections.

In summary, Grammarly's function in writing instruction is not limited to error correction. It develops greater linguistic awareness and encourages active student involvement in the editing process. Given that teachers do not provide direct guidance, Grammarly's potential in teaching writing is significant as it can help the teacher's feedback and enhance the writing skills of the students.

2.5. Teaching of Report Writing Through Grammarly

Many educators are using Grammarly in their teaching of writing because of its potential to help students improve their writing abilities. As previously mentioned, Grammarly assists in decreasing basic writing mistakes and increases writing consistency and student self-sufficiency in the editing process. Most of the studies, however, are focused on descriptive, narrative, or explanatory texts. Because of this, the current research intends to examine additional possibilities for using Grammarly in Teaching English as a Foreign Language (TEFL) contexts, more specifically, teaching writing.

Huang, Li, and Taylor (2020) did a similar study to see how Grammarly affects students' narrative writing, specifically with 43 students in their second year at a four-year university in China, and employed a writing pre-test and post-test design. Before using Grammarly, students' mean writing score was 58.05. After using writing support from Grammarly, the mean writing score increased to 73.90. Most students expressed satisfaction with Grammarly in the questionnaire results. Average ratings on the Likert Scale ranged from 3.4 to 4.26, which shows Grammarly is an effective tool and motivator for increasing students' writing skills.

In a different investigation reported by Karyuatry et al. (2018), Grammarly was utilized in an instructional action-research with 40 students in the Management

Department at As-Syafi'iyah University. Students wrote descriptive texts. The authors reported an enhancement in students' skills with a mean score of 79.1 in the first cycle and 84.6 in the second. Over 87.5% of participants reported that Grammarly helped them improve their essay revisions. The authors concluded that Grammarly helps students write more accurate and well organized descriptive texts.

Fahmi and Rachmijati (2021) used Grammarly to assess students' explanation texts in senior high school. Grammarly was used by thirty-two students in a study that used a pre-test and post-test design. Initially, the total error rate was 100%. There were errors of misselection and omission. After using the Grammarly application, the total error rate was 15%. The authors of the study said that Grammarly was helpful in students' writing and in improving their sentence structure in explanatory texts.

In their study, Maulidina and Wibowo (2022) evaluated the use of Grammarly as a feedback tool for descriptive texts in the X DKV–E class with 33 vocational students. The researchers conducted two cycles of the study and utilized interviews, questionnaires, and writing assessments as their main data collection tools. The integration of Grammarly produced high levels of writing accuracy, and error rates reduced from 100% to 15%. In their survey, more than 60% of students claimed that Grammarly was beneficial to their writing and that they preferred to use Grammarly while writing.

In the last study, Tran (2024) investigated the use of Grammarly on 50 fourth-year EFL students' graduation project writing at Nam Can Tho University, Vietnam. Most students (88%) used the Grammarly free version and expressed a preference for its grammar (M = 4.34), spelling (M = 4.18), and sentence structure (M = 3.72) features. The study showed that Grammarly was useful in improving the quality of students' writing, as well as in developing their understanding of the conventions of academic writing.

There are studies that support Grammarly's effectiveness in various areas. However, studies examining its effectiveness in report text writing are still limited. Considering report texts as a genre of writing, and in particular as a genre focused on the presentation of facts, there is a need for the presentation of information in a

logically structured and organized manner, as well as the use of accurate and formally stated linguistic expressions. These essential elements of report texts align well with the fundamental features of Grammarly. Thus, this study intends to fill the research gap by examining the features and potential benefits of Grammarly in report text writing in EFL classrooms.

2.6. Procedures of Teaching Writing Through Grammarly

The procedures in this study were based on Fahmi and Rachmijati (2021), who used Grammarly in teaching exposition texts. Although their study focused on a different genre, since they offered a genre-specific as well as an educationally appropriate procedure for combining Grammarly and teaching writing, their study was incorporated into this study. The framework they provided has three components: pre-activity, while-activity, and post-activity, and these components were used in this study to facilitate the teaching and learning process.

Table 2.1. The Research Procedure of Fahmi and Rachmijati (2021)

Stage	Activity	Description
Pre-Activity	Introduction and Preparation	The teacher explains the writing task, which includes describing an exposition text and its purpose, structure, language features, and examples relevant to students' daily life, and aids the students in constructing background knowledge.
While-Activity	Writing Practice and Application	The students compose their texts independently at first. This allows the teacher to assess the students' initial skill levels. After writing, the students review their texts with Grammarly. The teacher then goes over the revisions with the students.

Post-Activity	Reflection and Evaluation	Feedback from Grammarly is provided to students, and the teacher reviews the students' texts to evaluate the progress they have achieved and writes remarks that will assist in strengthening their confidence and improving the accuracy of their writing.

Tabel 2.1 demonstrates that Fahmi and Rachmijati (2021) implemented Grammarly through a structured sequence of clasroom activities. The staged activities indicate that automated feedback was applied within a guided learning process.

2.7. Advantages and Disadvantages of Using Grammarly in Teaching Report Writing

Using Grammarly while teaching writing has helped EFL learners improve their writing in terms of clarity, accuracy, and writing mechanics. Since report writing has to be objective, structured, and factual, Grammarly helps learners improve their academic writing through instant feedback and writing assistance. However, some limitations are to be critically considered by both teachers and learners.

Among Grammarly's main features is the identification and correction of students' grammatical and mechanical mistakes. According to O'Neill and Russell (2019), Grammarly analyzes student writing and offers suggestions related to grammar, punctuation, and sentence construction, thereby enabling students to edit their work with less direct teacher feedback. This is beneficial in writing reports, which is the one area where clarity and professionalism in the presentation of information are important.

Another advantage of Grammarly is its support in improving sentences and texts clarity. Dewi (2023) notes that Grammarly's clarity suggestions motivate students to transform unclear and complicated sentences into clear and easier to understand sentence structures. In writing reports, this function helps students to

enhance their sentences, remove unnecessary repetitions, and keep the writing objective, in accordance with the requirements of the genre.

Grammarly also helps students solve the issue of word repetition and broaden their vocabulary by providing suggestions for vocabulary enhancement. Such suggestions are particularly helpful for students because reports may require the use of certain specialized vocabulary and formal writing. According to Alhabib and Alghammas (2023), Grammarly aids students in developing their lexical awareness, which in turn leads to the improvement of writing accuracy and professionalism.

Regardless of its positive aspects, Grammarly has limitations. The main cause of concern is students' over-reliance on the application. If students ignore the learning of grammatical rules and the self-correcting process, they will become dependent on Grammarly's automatic corrections. Tran (2024) states that failing to accept Grammarly's suggestions, without understanding the reasoning behind them, may not develop one's writing skills.

Grammarly also fails to provide writing guidance in general, including genre-specific writing, such as academic writing. In writing reports, for example, the application does not assess whether students have followed to the relevant report writing structure or if they have employed appropriate factual and impersonal language. In view of the fact that Grammarly can help eliminate and correct basic language errors, teachers must provide writing guidance to students with respect to the structuring and organization of their ideas, as well as to the writing rules and standards of report writing.

One more limitation is how suggestions for tone and style may cause some inconsistency in student writing. Grammarly suggests some feedback that is actually different from the expectations of formal academic writing. For instance, it may encourage a more casual approach or restate a student's writing with less of a neutral academic tone, which might be a challenge for students, particularly those who are still working on their understanding of the formal academic tone.

In summary, Grammarly helps students to identify some writing issues and assists with writing clarity and writing with more variety. These features assist

students in producing more well-organized reports that are properly and completely organized, and assist with the improvement of writing. Grammarly's usefulness is highly dependent on how it is integrated or used in the classroom. It is important that the teacher balances the use of Grammarly with some direct instruction and some structured practice, so that the students are revising their writing, and they also understand why the revisions are necessary.

2.8. Theoretical Assumptions

This research makes the assumption, supported by the previous studies, that Grammarly does help students develop their skills in report writing. Writing is a genre of communication that is factually based and therefore needs a high level of precise and objective structure, and clear writing. These characteristics match the main features of Grammarly feedback on grammar, punctuation, clarity, structure, tone, and style.

Harmer (2004) and Hyland (2003) elaborate that a combined approach of teaching writing as a process and as a genre is most effective, as it enables learners to plan, draft, revise, and edit their texts. In this instance, Grammarly is a means of assisting learners in the revision and editing stages of writing. Furthermore, Flower and Hayes (1980) stress that writing is a process that requires reflection and feedback in order to improve, which is the kind of feedback Grammarly offers with its suggestions and automated feedback features.

The studies done by O'Neill and Russell (2019), Dewi (2023), and Alhabib and Alghammas (2023) suggest that Grammarly has a positive effect on students' writing and their language awareness and accuracy. With Grammarly, students can start to reflect on their grammar and word choices, and are encouraged to make self-revisions. While Grammarly does not provide feedback on content that relates to genre, it can address some basic writing problems that help facilitate the writing of reports that are clearer and more professional.

Therefore, this study assumes that using Grammarly in the teaching of report writing will positively influence students' writing skills. It is expected that

some aspects of writing, particularly those related to language use, will improve more than others.

2.9. Hypothesis

Based on the theoretical framework and the related literature, the researcher states the following hypothesis for the study:

"There is an improvement in students' report text writing after using Grammarly as a feedback tool."

With the assistance of Grammarly, students may learn to identify and rectify their own writing mistakes. This is because Grammarly provides suggestions in real-time regarding grammar, punctuation, clarity, and word choice. Thus, it is anticipated that students will be able to draft clearer, more precise, and well-organized report texts than those produced in the pre-test.

This chapter provides the most relevant literature, including the definition and components of writing, problems in students' writing, the definition and components of report text, teaching English report writing, and Grammarly as a feedback tool. This also covers the steps to teach report writing using Grammarly, its strengths and limitations, and ends with the theoretical framework and the hyphothesis.

III. METHODS

This chapter describes the methodology for determining whether Grammarly, as a feedback tool, will help improve students' report text writing skills. The explanation describes the various sections of the methodology, such as the design of the research, research variables, sources of data, data collection instruments, teaching procedures for report text writing, data analysis processes, treatment of data, and testing of the hyphothesis.

3.1. Research Design

This study utilized a quantitative method and a pre-experimental design, where a single group was used for both pre-test and post-test design. A pre-experimental design is a type of research in which there is no control group, and data is obtained from only one group of participants. According to Creswell (2012), the classroom design was appropriate given the time, the potential ethical concerns, and the challenge of forming homogeneous groupings in a school setting. Before and after treatment assessments of student writing skills are often used. Thus, in assessing the effectiveness of feedback tools like Grammarly, this design was relevant in describing the case in an actual classroom setting.

In this design, students participated in a pre-test (T1) before any treatment, then completed learning activities with Grammarly as a feedback tool (X), and after the treatment, a post-test (T2) was administered to assess the level of enhancement in report writing skills. The assessment evaluated students' report writing skills in the aspects of content, organization, vocabulary, language, and mechanics. Apart from examining overall writing improvement, the scores of each writing aspect were compared to identify the aspect that showed the greatest improvement after the treatment.

The research design can be symbolically represented as follows:

$$T1 \times T2$$

Notes:

T1 = Pre-test (students write a report text without using Grammarly)

X = Treatment (students use Grammarly to revise and improve their writing)

T2 = Post-test (students write a new report text without using Grammarly to measure improvement)

The research was conducted at SMK Negeri 1 Bandar Lampung with students of Class XI TKJT 1, from 14th October to 5th November 2025, during the academic year 2025/2026.

3.2. Research Variables

A variable in a research is defined as a characteristic or a property that can be measured and that varies among the subjects in a study. Creswell (2012) describes variables as measurable attributes that a researcher examines in order to understand how they affect each other. In the field of research, variables are central to any study, as their relationships are typically analyzed using statistical methods. As stated by Sugiyono (2016), examining measurable aspects systematically and objectively is known as quantitative research. Relationships among variables can be determined after hypotheses are tested and statistical analyses are performed. This study analyzes changes of a statistically significant changes in students' report writing skills resulting from the use of Grammarly by assessing overall writing skills and particular writing components to determine which aspect improved the most.

Quantitative research recognizes different types of variables, regardless of the theoretical approach being adopted. Creswell (2012) defines independent variables as the types of variables that researchers manipulate or control, whereas

dependent variables are those that change as a result of the impact of the independent variable. This means that the independent variable represents the cause, while the dependent variable represents the effect.

3.2.1. Independent Variable (X)

In this study, the use of Grammarly as a feedback tool in the teaching of the writing process is the independent variable. Grammarly was deliberately implemented as a treatment to provide automated feedback to students in real-time during the instructional process for writing errors, omissions, inappropriate word usage, and sentence clarity. During the drafting and revising stages, students were prompted to make self-corrections and independently revise their work. Thus, for the purpose of this study, Grammarly was applied as a treatment to examine its effect on students' writing skills.

3.2.2. Dependent Variable (Y)

The researcher focused on students' report writing skills as the dependent variable in the study. This variable relates to the students' abilities to generate factual and well-structured report texts, and was evaluated through a writing task pre-test and post-test. Using an analytic scoring rubric devised by Jacobs et al. (1981), the students' writing results were evaluated in terms of five areas: content, organization, vocabulary, language use, and mechanics. Students' writing scores were used to measure the level of improvement in their writing skills after receiving Grammarly as a feedback tool.

In summary, this study explained the use of Grammarly as the independent variable and its effect as the dependent variable, determined by changes in students' writing skills before and after the treatment.

3.3. Data Source

The data for this study were taken from the students' written work in the pre-test and post-test tasks. The writing samples served as the primary data for measuring the impact of Grammarly on students' report writing skills. The data were recorded as quantitative data because they were assessed based on writing

assessment criteria that included the aspects of content, organization, vocabulary, language use, mechanics, and content.

The participants were Grade XI students from the vocational school SMK Negeri 1 Bandar Lampung, who attended English writing instruction during the 2025/2026 academic year. These students wrote report texts before and after Grammarly was introduced, providing a data set for comparison of the students' writing skills.

To better demonstrate the sample and the participant of the study, the subsequent section discusses in detail the sample and the population of the study.

3.3.1. Population and Sample

The population of this study consisted of all Grade XI students at SMK Negeri 1 Bandar Lampung in the academic year 2025/2026. Grade XI comprised 17 intact classes from eight different study programs, namely TKJT (2 classes), DKV (2 classes), Animasi (2 classes), MPLB/APK (3 classes), AKL (3 classes), Pemasaran (2 classes), Tata Boga (2 classes), and Tata Busana (1 class). Each class consisted of approximately 36 students. Therefore, the total population of this study was approximately 612 students.

The sample of this study was selected using the cluster random sampling technique. This technique was applied because the population was organized into natural groupings or clusters in the form of intact classes. From the available Grade XI classes, one class was randomly selected as the sample. The chosen class for this study was Grade XI TKJT 1, which had 36 students, including 29 males and 7 females.

The use of cluster random sampling in this study is justified because it allows the researcher to work with an intact class and not create any disruption to the school timetable and the arrangement of the classroom. Additionally, working with a single intact class is likely to facilitate the implementation of the treatment while preserving the actual social interaction within the class. As a result, the class and the sample are aligned with the purpose of the study, as the approach enables

the researcher to find out how Grammarly affects students' report writing skills in a real classroom environment.

3.3.2. Setting

The research setting was SMK Negeri 1 Bandar Lampung during the researcher's teaching practice in Grade XI TKJT 1. The researcher was in the classroom for three hours and during this time, learners accessed Grammarly on their mobile devices. This enabled Grammarly to be implemented into routine classroom activities.

In this research, Grammarly as a feedback tool was employed during the first semester October 14th to November 5th, 2025. This involves 36 students, 7 females, and 29 males. The learning process took place over 5 meetings, conducted once a week. Each meeting was 4 lessons (4 x 45 minutes), 180 minutes in total per session.

Under the guidance of the English teacher to maintain classroom discipline and the integrity of the research, the researcher conducted all activities involved in the research, including the administration of the pre-test and post-test. The use of Grammarly in the classroom while students were doing writing activities allowed for the classroom environment to be suitable for the collection of data. This situation helped to assure the school that the findings of the research were relevant to an actual classroom situation.

3.4. Data Collection Instruments

This study used data collected from writing tests, including a pre-test and a post-test, with Grammarly as the feedback tool. The data collection process is further detailed in the procedures provided for each test. This process is designed for clarity, consistency, and transparency, and enables readers to follow the evaluation process for student writing and the feedback tool used in the classroom.

3.4.1. Writing Test

In this study, writing tests were used to evaluate students' writing skills. Writing tests, are among the most commonly used tools in language assessment to

evaluate learners' ability to articulate thoughts and ideas in writing, given a set of criteria and a prompt. Weigle (2002) notes that writing tests are indicative of a student's linguistic competence and the extent to which students can utilize such competence in a relevant writing activity. In this case, the writing test was meant to evaluate students' ability to write a factual text, particularly a report text in accordance with genre-based curriculum expectations.

The integration of Grammarly as a feedback tool required a pre-test and post-test to be administered changes in students' writing skills. In both tests, students were asked to write a report text on a given topic within a set time limit. Report texts exemplify general classification and description, as cited in Gerot and Wignell (1994).

To promote objective and enhance evaluations of student writing, the analytic rubric of Jacobs et al. (1981) was adopted. According to the model, writing consists of five components: content, organization, vocabulary, language use, and mechanics. Each component is given a score to determine the positive and negative aspects and to identify the component best suited for further development. This type of rubric has been widely used in writing studies due to the multidimensional nature of writing and the detailed feedback is provided (Brown, 2004).

The themes of the writing tasks were controlled to secure content equivalence on the pre-test and the post-test. Although the tasks covered different topics, they were closely related in terms of complexity and relevance. Furthermore, students were instructed not to use Grammarly and other digital tools during the writing tests to maintain the integrity of the assessment of individual writing skills.

The use of the writing tests, combined with a reliable and validated rubric, helps that the data reflect students' actual writing skills concerning Grammarly as a feedback tool.

3.4.2. Pre-Test

A pre-test was administered to determine participants' skill level before the introduction of Grammarly. For the pre-test, participants from Grade XI TKJT 1 SMK Negeri 1 Bandar Lampung were asked to write a report text following the

instructions given by the teacher. Pre-test monitoring was done by the teacher during the regular English class. Students were instructed not to use Grammarly or any external resources and were given a time limit. Texts were evaluated and scored using the analytic scoring rubric. The five areas of the rubric include: content, organization, vocabulary, language use, and mechanics. The pre-test was the initial data for the post-test and was also used to measure the effectiveness of the Grammarly treatment.

3.4.3. Post-Test

The post-test was given after the participants had completed the complete treatment cycle with Grammarly. At this stage, the goal was to evaluate how students' report writing skills had advanced after the students got automated feedback from Grammarly, and after the students edited their texts.

To complete the post-test, students had to compose report texts on a new topic of the same level of difficulty as the pre-test, to ensure assessment validity. It was an exercise that was limited by time. Students were instructed to complete the exercise without the use of Grammarly, so that the post-test would reflect their personal writing skills after the treatment.

The texts from the post-test were scored according to the same rubric used for the pre-test. The rubric measures writers' assessments for report writing in terms of content, organization, vocabulary, language use, and mechanics. The same criteria were used for all assessments, and the researcher examined the change in students' writing skills objectively.

The purpose of comparing the pre-test and post-test results is to examine whether the use of Grammarly after the treatment could improve the students' report writing skills, and which aspect of report writing was most improved.

3.4.4. Validity of the Instrument

In Brown's (2004) description of educational measurement, validity refers to the degree to which an assessment tool intends to do what it is designed for. When it comes to language testing, especially writing assessment, validity becomes even

more important so the outcomes of assessments are meaningful and reliable. It is important to note that construct validity is not a complete concept, rather it is made up of several parts and needs various types of evidence to support score interpretation (Weir, 2005). Within the scope of this study, to give a proper reflection of the students' report writing skills, the writing test was designed to address two types of validity, which are content and construct validity.

1. Content Validity

Content validity refers to the degree to which criteria achieve the objectives of a course and the course's content (Heaton, 1988). In the current study, the writing test assesses students' ability to write report texts and looks at the components of content, organization, vocabulary, language use, and mechanics. These components align with the competencies expected from the senior high school English curriculum, which fosters students' skills to create various factual and informative texts.

To investigate the validity, the researcher reviewed the school syllabus and consulted with an English teacher at SMK Negeri 1 Bandar Lampung to confirm that the report texts were part of the learning objectives for the grade XI. Even though the topic was part of the syllabus, students had not yet been taught report texts before the instruction. Therefore, the pre-test was able to assess the students' writing ability at the beginning of the instruction. Since the assessment was based on the syllabus, the test was valid in terms of the content coverage and relevance.

2. Construct Validity

Construct validity assesses the degree to which a test measures what it claims to measure. This type of validity attempts to assess how well the components of a test match the traits or the skills being assessed. Brown (2004) explains that this type of validity evaluates how the components of a test reflect the theoretical construct that the test is supposed to measure. In this case, the construct was the students' skills to write report texts, which includes developing ideas, logical flow, correct use of language, vocabulary, and mechanics.

In the interest of construct validity, students' writing was assessed through an analytic scoring rubric, as modified from Jacobs et al. (1981). The evaluation of

writing has been divided into five components: content, organization, vocabulary, language use, and mechanics. These components represent fundamental aspects of writing and closely align with the theoritical attributes of report wrting. Therefore, the writing test can be considered a valid measure of the construct.

To conclude, both content and construct validity enhance the assessment's reliability and accuracy, as both types of validity relate to the assessment instrument's theory and process, ensuring the assessment truly aligns with the goals of the writing of report texts and the content, theories, and practice of writing assessment frameworks.

3.4.5. Reliability of the Instrument

An important characteristic of an instrument is its reliability. Reliability indicates the degree to which an instrument yields the same result under the same conditions and at different times, or with different evaluators. A reliable instrument measures the same thing and is replicable. In writing assessments, reliability is crucial to balance the subjective nature of the scoring and to bring fairness and objectivity to the assessment of writing skills.

In this research, the writing test was graded using an analytic scoring rubric, which for each of the five aspects of report writing text (content, organization, vocabulary, language use, and mechanics) assigns a score. Because scoring is done by two independent raters, the researcher used inter-rater reliability to analyze the level of correlation between the two score pairs. Especially for writing tests, where scoring is subjective, inter-rater reliability is used. As Brown (2004) observes, the use of several raters and the assessment of inter-rater reliability improve the scoring by reducing the influence of a single rater.

In order to describe the procedure employed to examine the inter-rater reliability and present the results of the pre-tests and post-tests, the author needs to first explain how the scoring was done in a consistent manner and without any individual bias.

1. Procedure for Assessing Inter-Rater Reliability

To establish scoring consistency and lack of bias, inter-rater reliability was assessed and the correlation for two raters was obtained via Spearman's Rank Correlation. This technique is appropriate for ordinal levels of measurement, such as the rubric for writing scores, since the differences between the scores are not equal. It is highly probable that Rater 1 and Rater 2 assigned scores at different levels. For inter-rater reliability, Spearman's correlation is the appropriate choice in the literature (Setiyadi, 2018) for educational research that includes ranking or rubric scoring of any sort. Thus, the researcher was able to most accurately measure the reliability of the two raters.

The Spearman's Rank Correlation formula is as follows:

$$p = 1 - \frac{6\Sigma\, d_i^2}{n(n^2 - 1)}$$

Notes:

p = Spearman's rank correlation coefficient

d_i = Difference of rank correlation

n = Number of students

In the interest of determining the range of the reliability coefficient, the study depended on Arikunto's (2010) reliability scale, which explains the various levels of reliability as follows:

Value of r	Interpretation
0.800 – 1.000	Very High Reliability
0.600 – 0.799	High Reliability
0.400 – 0.599	Moderate Reliability
0.200 – 0.399	Low Reliability
0.00 – 0.199	Very Low Reliability

Before the scoring, both raters used the same analytic rubric, one that has been modified from Jacobs et al. (1981) to maximize the clarity and consistency of scoring. The scoring was done independently and the raters did not discuss the scores. The scores were processed through SPSS to calculate a Cronbach's Alpha to assess the reliability and consistency of the scoring rubric across the raters.

2. Results of Inter-Rater Reliability

In the writing assessment, this study concentrated on the establishment of scoring reliability. Subjectivity in evaluation may influence the judgment of the assessors. Therefore, this study aimed to determine the level of agreement between the two scorers (the researcher and the English teacher) regarding the evaluation of students' writing. Assessing inter-rater reliability is to increases the confidence in the data to be used for further analysis.

To confirm the reliability coefficient as a statistical measure of reliability, Cronbach's Alpha was employed. This statistical measure determines how consistent the results from the different evaluators are. The more reliable the scoring process, the more a writing test can be considered a good measure of a student's report writing skills, resulting in a higher alpha score.

Table 3.1. Inter-Rater Reliability Pre-Test

Reliability Statistics

Cronbach's Alpha	N of Items
.948	2

Table 3.2. Inter-Rater Reliability Post-Test

Reliability Statistics

Cronbach's Alpha	N of Items
.988	2

According to the scores of both evaluators, the pre-test inter-rater reliability coefficient was (α = 0.948), while the post-test coefficient was (α = 0.988), and showing a notable increase. Both scores are categorized in the same range, confirming that the evaluators scored consistently with no bias. It can be concluded that the writing scores in this study are reliable and suitable for statistical analyses detailing the effect of Grammarly as a feedback tool to enhance the report students' report writing.

In summary, the reliability of the tool and the consistency of students' writing scores allow the researcher to conduct data analyses with confidence.

3.5. Research Procedures in Teaching Report Text Writing Using Grammarly

With some modifications, this study adopted the procedural framework proposed by Fahmi and Rachmijati (2021) to guide the implementation of the treatment. The framework was adjusted to suit the context and objectives of the current study. To ensure systematic implementation, the procedures were organized into five meetings. Table 3.3 presents the sequence of teaching activities, outlines the main writing tasks for each meeting, and explains how Grammarly was integrated during the treatment sessions.

Table 3.3. A Simplified Overview of The Lesson Plan

Meeting	Activity Focus	Detailed Description	The Use of Grammarly
1	Pre-test writing & introduction to report text	• The teacher explains the purpose of the pre-test writing and provides a list of humans and things for students to choose from. • Students write a report text (pre-test) about one	Not used

		selected topic, with at least 300 words. • After the writing session, the teacher introduces the concept of report texts, including their general structure and language features.	
2	Introduction to Grammarly and collaborative practice	• The teacher introduces Grammarly, explains its key features, and demonstrates how it works using a sample report text with some errors. • Students work in small groups to analyze short report texts using Grammarly, focusing on grammar corrections, structure, and language features. Each group shares their findings in class. • The teacher explains the revision log and how students will use it to track Grammarly feedback and their corrections in the next session.	Used

		• Students write a report text on a chosen topic (flora or natural phenomena) at home. They must submit it via Google Drive two days before Meeting 3 for feedback.	
3	Peer and teacher feedback session for students' writing	• Students bring their drafts. Then they use Grammarly in class to check their drafts with teacher guidance. • Students fill out the revision log using Grammarly's feedback and their corrections. • The teacher also gives oral feedback and reviews key points about their drafts. • Students revise their writing and continue writing a new report text with the different topic (fauna or human) at home and submit their new drafts via Google Drive for teacher feedback.	Used

| 4 | Peer and teacher feedback session for students' writing and analysis of report texts | • Students come to class with the drafts of their report texts. The teacher offers some whole-class feedback, pointing out frequent errors in structure, and then provides individual feedback on their drafts via Google Drive.

• Students work in groups to analyze a sample report text containing language errors and incorrect structure. They are asked to identify a minimum number of errors and reorganize the text based on the correct report text structure.

• After the manual revision, students check the same text using Grammarly to compare the feedback with their own findings.

• The teacher leads a brief discussion on the differences between manual correction and Grammarly feedback, emphasizing the | Used |

		strengths and limitations of the tool. • The session ends with a short review of report text writing, and students are instructed to revise their individual texts at home and submit the final version via Google Drive before Meeting 5.	
5	Post-test writing	• They begin the post-test by writing an individual report text on a new topic related to fauna or flora, with a minimum requirement of 300 words without the use of Grammarly.	Not used

At all these stages, students learn about the different genres of report writing, practice self-editing, and become more aware of the use of language. During the writing process, students use Grammarly to make revisions and receive feedback on their written work.

3.6. Data Analysis

The research process consists of several stages, one of which is evaluating data, which is important as it aids the researcher in understanding the unprocessed data and subsequently, the questions that the research aims to answer. In quantitative research, as stated by Creswell (2012), data analysis involves the use of a particular collection of techniques, which includes systematic data organization and the application of particular statistical techniques to determine the patterns,

examine and answer the hypotheses, and draw conclusions. In this particular research, data analysis described the level of enhancement in the report writing skills of students after receiving feedback from Grammarly, in general, and more specifically in certain writing aspects.

The data comprised the students' pre-test and post-test scores from the writing tasks. The test scores were collected from an analytic scoring rubric, which assessed the following aspects of writing: content, organization, vocabulary, language use, and mechanics. The data analysis involved descriptive analysis, normality test, inferential analysis, and normalized gain analysis, which were employed to assess and describe the writing skills of the students.

3.6.1. Descriptive Analysis

This study applied descriptive statistical analysis in determining students' report writing skills before and after the use of Grammarly as a feedback tool. Descriptive analysis is about summarizing and explaining the data, which assists researchers in pattern, direction, and distribution identification and interpretation. Descriptive statistics, as Creswell (2012) noted, assist in explaining the average, range, and comparison of a distribution through the use of mean, percentage, and standard deviation, among other measures.

In this study, descriptive analysis was applied to evaluate the pre-test and post-test results in determining the level to which students improved their report writing skills after the treatment, both in the overall and in the individual writing components. The analysis focused on the five aspects of report writing, in which the students demonstrated skills in content, organization, vocabulary, language use, and mechanics. The following aspects were included in the statistical analysis of the data:

1. Mean (Average Score)

The mean indicates the average score on students' writing that was obtained for both the pre-test and post-test. This score indicates the overall level of the students' writing and enables the researcher to assess the students' writing skills before and after the Grammarly treatment and to observe general improvement in

each aspect of report writing.

It is determined by using the equation below:

$$\bar{X} = \frac{\Sigma X}{N}$$

(Sudijono, 2011)

Notes:

$\bar{X}$ = Mean score

ΣX = The total of all individual scores

N = Number of students

2. Standard Deviation

       The measure of standard deviation indicates how much students' scores differ from the average. A low score means student scores are grouped around the mean. On the other hand, a higher deviation means student scores are further from the mean and have more differences. This assists the researcher in measuring how much difference there is in the students' writing skills across the class.

  The standard deviation can be computed with the following formula:

$$SD = \sqrt{\frac{\Sigma(X\text{-}\bar{X})^2}{N}}$$

(Sudjana, 2005)

Notes:

SD   = Standard deviation

X   = Individual score

$\bar{X}$ = Mean score

N   = Number of observations

3. Gain Score

A gain score indicates the level of enhancement of students by measuring the difference between the post-test and the pre-test scores. It quantifies the extent of development in students' report writing after receiving feedback from Grammarly.

This is measured using the formula below:

$$G = X_{post} - X_{pre}$$

(Arikunto, 2010)

Notes:

G   = Gain score

X_{post} = Post-test score

X_{pre} = Pre-test score

3.6.2. Normality Test

There are different methods to evaluate the distribution of data in a dataset. One such method is evaluating the normality of the dataset (the students' pre-test and post-test scores). This is necessary when the parametric tests, such as the paired sample t-test, are applied. In most parametric hypothesis tests, datasets need to be normally distributed. This is the focus of the study by Ghasemi and Zahediasl (2012). In order for the results of the hypothesis tests to be credible, the tests must satisfy the assumptions.

This research analyzed students' report writing pre-test and post-test scores using the Shapiro-Wilk test for the normality of distribution. This test is considered reliable for small and moderate sample sizes (Razali & Wah, 2011). It is based on the sample's order statistics and how they align with the normal distribution. A Shapiro-Wilk test with a significance value greater than 0.05 indicates that the test is normally distributed and that the data can be analyzed. On the other hand, a Sig.

≤ 0.05 suggests the null hypothesis (data are normally distributed) should be rejected, indicating a violation of normality.

In the case of the Shapiro–Wilk test, the test remains superior, having the most power when compared to its competitors, and when working with a sample size of 50 or fewer (Razali & Wah, 2011). SPSS was used to analyze the students' pre-test and post-test scores, and the normality test results determined which statistical tests would be used next to compare the students' writing skills.

3.6.3. Inferential Analysis

Inferential analysis involves drawing conclusions or making predictions about a population based on a sample. Creswell (2012) argues that inferential statistics help researchers understand whether the differences or relationships in the data occur randomly or represent actual impacts. In this study, the researcher used inferential analysis to understand the extent to which Grammarly, as a feedback tool, helped students improve their report writing skills.

With reference to the research design, the case involves a one-group pre-test and post-test design, the study used the paired sample t-test (dependent t-test). This test compares the means of the same group or class of students before and after the treatment. As noted by Dantes (2012), comparing two sets of scores from a single group is an effective way to evaluate the effectiveness of a treatment. Similarly, the objective of this research is to find out whether students' report writing skills improved after using Grammarly.

The paired sample t-test is calculated using the following formula:

$$t = \frac{\bar{D}}{s_D \ / \ \sqrt{n}}$$

(Sugiyono, 2016)

Notes:

$\bar{D}$ = the mean difference between pre-test and post-test scores

s_D = standard deviation of the difference scores

n = number of students

t   = t-value used to determine significance

The calculated test scores were used to determine the t-value, which was compared to the critical value in the t-distribution table at the given degree of freedom (n-1) and the level of significance (usually α = 0.05). If the t-value is greater than the critical value, then students' writing skills were improved by the use of Grammarly.

The paired sample t-test was chosen because the study only dealt with one group of students who were evaluated on two separate occasions (pre-test and post-test) to examine the effectiveness of Grammarly as a tool for providing feedback. This particular test is commonly used in educational research because it identifies impacts that may result from specific treatments (Creswell, 2012). Besides descriptive analysis, this study intended to determine if the improvement recorded was statistically significant, which enhances the credibility and trustworthiness of the findings.

Overall, the analysis in this study was centered on the effect of Grammarly on students' report writing skills. A paired sample t-test was used to see whether there was an improvement in students' report writing skills aftter the implementation of Grammarly, and descriptive statistics were used to analyze students' writing skills across various aspects of writing in order to indentify which aspects showed the most improvement.

3.6.4. Normalized Gain Analysis

To determine the level of improvement in each writing aspect, the normalized gain (N-Gain) formula proposed by Hake (1998) was used. The normalized gain measures the proportion of actual improvement relative to the maximum possible improvement. The formula is presented as follows:

$$g = \frac{\textit{Post-test - Pre-test}}{\textit{Maximum Score - Pre-test}}$$

Notes:

g = normalized gain score

Post-test = mean post-test score

Pre-test = mean pre-test score

Maximum Score = maximum possible score for each aspect

The interpretation of the normalized gain in this study followed Hake's (1998) classification. The categories of N-Gain are presented as follows:

N-Gain Score	Category
$g \geq 0.70$	High
$0.30 \leq g < 0.70$	Medium
$g < 0.30$	Low

Based on Hake's classification, a gain score of 0.70 or above indicates high improvement, a gain score between 0.30 and 0.69 indicates moderate improvement, and a gain score below 0.30 indicates low improvement.

3.7. Data Treatment

In quantitative research, data treatment is one of the steps that involves handling the raw data to make it ready for processing using statistical data analysis. Setiyadi (2019) defines data treatment as the process in which is researchers process their data to reach a statistically satisfactory conclusion. Data treatment, often associated with statistical research, in experimental research focuses on analyzing whether observed differences are statistically significant and constructing conclusions with a high degree of certainty. In the same way, Creswell (2012) emphasizes that properly treated data accurately reflect of the treatment on participants. In this study, data treatment was carried out to assess improvement in students' report writing skills and to identify which writing aspects showed the most improvement after the treatment.

The process of data treatment in this study was modified from Setiyadi (2018), with other studies referenced to strengthen the methodology. Each of the steps is explained in detail below.

1. Data Screening and Verification

For the first step involved reviewing the student writing scores in the pre-test and post-test. This was done in order to identify any possible absence of data, erroneous scores, or discrepancies that could impact the analysis's reliability and validity. As noted by Fraenkel et al. (2012), in data analysis, validity and reliability are connected with the potential of the data to be used to demonstrate theoretical principles and evaluative conclusions. During this stage, the researcher confirmed that all responses from each student were recorded completely and that scores were aligned with the writing rubric.

2. Normality Check for T-Test Assumption

Before conducting a paired samples t-test and making any inferential analyses, the difference scores (post-test minus pre-test) need to be assessed for normality. Setiyadi (2018) explained that for most parametric tests, including the t-test, to be valid, the assumption of normality has to hold. The Shapiro-Wilk test, which was done in SPSS, was used to determine the normality of the distribution. Distribution being normal, a paired samples t-test will be done to determine the extent of the students' improvement.

3. Coding and Data Entry

After reporting the data, the following action is to code and enter the data in SPSS. To keep the pre-test and post-test scores differentiated, each student was assigned an individual ID number. In Gay et al. (2012), the authors explained the important role that data coding has on the accuracy of analysis, more so in situations involving repeated measures. The researcher categorized the scores into various assessment levels, and each data set was categorized based on the assessment structure and the various components it consisted of, which were content, organization, vocabulary, language use, and mechanics.

4. Difference Score Calculation

In measuring improvements in students' writing skills, the researcher documented the difference score by taking the score from the post-test, then deducting the score from the pre-test for each student. These scores accounted for individual improvements and were used to evaluate the treatment's effect. Setiyadi (2018) suggests that difference scores are beneficial for this type of design to define the scope of effects of the treatment. In addition, calculating the mean and standard deviation offered a summary of the distribution of the data as well as the summary of the data in relation to the level of improvement shown by the students.

5. Statistical Significance Testing

Hypothesis testing proceeded with the use of the paired samples t-test. The researcher investigated whether students' report writing scores improved significantly. The researcher set a limit of 0.05 for the significance of the test ($p < 0.05$). A t-test p-value lower than 0.05 is interpreted to mean that Grammarly positively affects students' report writing skills. As Creswell (2012) observed, the primary focus of statistical testing is on the effect of the treatment in this case, and the treatment effect was the outcome of the study, which is, in turn, the result that was intended to be generalized.

The various procedures of the five stages of data handling have been evaluated and found to be reliable, valid, and in compliance with educational research standards. Such procedures improved the methodological assessment of Grammarly's effect on students' writing, thus reinforcing the integrity of the study.

3.8. Hypothesis Testing

The assessment of data to confirm or disprove an assumption is known as hypothesis testing in quantitative research. Creswell (2012) states that a hypothesis is an explanation of a presumed association or relationship between two or more variables. In the field of education, the purpose of hypothesis testing is to determine whether or not there is a significant difference due to one or more treatments, and this is achieved through the comparison of two or more data sets that were collected before and following the application of the treatment.

This study aimed to establish whether there was an improvement in students' report writing skills after the use of Grammarly as a feedback tool. For this case, a paired sample t-test was used as it applies to two related samples, which are the pre-test and post-test scores of the same individuals (Ary et al., 2010).

The hypotheses for this study were formulated as follows:

H0 = Sig. > 0.05   H1 = Sig. < 0.05

- Null Hypothesis (H0): There is no improvement in students' report text writing after being taught using Grammarly as a feedback tool.

- Alternative Hypothesis (H1): There is an improvement in students' report text writing after being taught using Grammarly as a feedback tool.

Based on the significance level (α) of the null hypothesis (H0) being 0.05, it was determined whether the null hypothesis was accepted or rejected. Gay et al., (2012) state if the p-value (Sig) derived from the t-test is greater than 0.05 ($Sig > 0.05$), the null hypothesis (H0) is accepted. This means there is no significant difference. However, if it is determined that the p-value is < 0.05 ($Sig < 0.05$), the null hypothesis was rejected and the alternative hypothesis accepted, meaning there is a significant difference in the level of writing.

This was the procedure the study used in determining if Grammarly was integrated enough to meaningfully improve students' report writing skills in a measurable and statistically reliable manner.

This chapter describes the various components that form the methodological frameworks used in the study. It described the different research designs and frameworks, research variables, sources of data, data collection instruments, procedures for the teaching of report text writing, data analysis, data treatment, and procedures for the testing of the hypothesis. These elements guided the researcher in conducting the study in a systematic way and helped the researcher to validate and verify the findings in determining the use of Grammarly as a feedback tool in developing students' report text writing skills.

V. CONCLUSION AND SUGGESTION

This chapter presents the final considerations of the study, summarizing the results regarding students' report writing skills. Furthermore, it provides suggestions for teachers and future researchers about digital feedback tools and their applications in writing.

5.1. Conclusions

The use of Grammarly as an automated feedback tool improved students' report writing skills. Students' writing scores in the pre-test and post-test showed a clear and significant difference. This indicates students' final draft improvements as a result of the treatment. These findings were further explained with the use of statistics. A high inter-rater reliability was demonstrated which indicates that the scoring was not only consistent but also reliable. A normality test showed that the assumption of normality was achieved, thus a paired sample t-test was used appropriately. There was a positive and statistically significant difference in pre-test scores when compared to post-test scores. This demonstrated the positive influence Grammarly had on students' report writing skills.

The data suggested improvement across all aspects of writing described in the Jacobs et al. (1981) analytic rubric, including content, organization, vocabulary, language use, and mechanics. Among all rubric areas, organization showed the highest proportional improvement, while content demonstrated the second proportional improvement. This demonstrates that students were able to develop and elaborate their ideas more clearly after feedback was provided. Enhancement in students' grammatical accuracy, vocabulary, and mechanics was primarily attributed to the automated feedback from Grammarly and the revision activities,

which supported clearer expression and more accurate language use.

To conclude, the teachers' feedback and Grammarly as a feedback tool helped students make significant enhancements to their skills in writing reports.

5.2. Suggestions

The study revealed that the use of Grammarly helped students enhance the accuracy and quality of their report writing. While the results of the study were positive, there are several areas of the study that future teachers should consider improving. For teachers, Grammarly is effective only if students have access to the tool and the teacher support to assist students in understanding the comments and how to use the tool. Similarly, students are continually expected to engage in the revision process and not depend on feedback provided by the tool.

Considering the limited understanding of using digital feedback within various educational settings, text types, and levels of proficiency, the present investigation attempts to offer understanding and stimulate additional studies in this field. Based on the findings, several recommendations will be offered to English teachers and to future researchers, which will be discussed in the next subsections.

5.2.1. Suggestions for English Teachers

Based on the findings of this study, several recommendations can be made to help teachers maximize the potential of Grammarly in writing instruction. These suggestions focus on the constructive pedagogical strategies that teachers can apply to student-centred technology effectively:

1. Teachers should consider technical factors during the implementation of Grammarly, particularly internet stability and initial access issues. Since some students may experience difficulties logging into the platform, teachers are advised to provide step-by-step guidance or tutorials to ensure smooth participation.

2. As Grammarly often updates its system and features, teachers are encouraged to stay informed about these changes before integrating the tool into classroom instruction to ensure effective use.

3. Teachers are encouraged to combine Grammarly feedback with direct teacher guidance to support students' content development, organization, and genre accuracy in report writing, rather than relying solely on automated corrections.

4. It is important for teachers to monitor which students are able to use Grammarly and which students are not, so that support and feedback can be fairly differentiated and more options can be made to accommodate those students.

5. Teachers need to help students understand the reason behind the feedback, especially given that the Grammarly feedback has not been accessed for long periods of time due to technological problems.

Grammarly's effective implementation in the classroom is affected by both the classroom strategies and the teacher's willingness to deal with classroom technical issues. Technology in the classroom will be supportive of learning if the teacher is prepared to deal with technical issues in an educational way.

5.2.2. Suggestions for Future Researchers

Considering the study's limitations, especially those concerning the technical accessibility and the environment of the classroom, the following suggestions have been made for future researchers:

1. Future studies should explore ways to reduce students' dependence on AI-based feedback tools such as Grammarly in writing instruction.

2. Future studies may compare students who use online Grammarly feedback with those who receive offline or non-AI feedback to examine differences in writing development.

3. Future researchers may allow students to practice using Grammarly before the main activity to minimize technical difficulties during the research process.

4. Future researchers should evaluate and report the effects of Grammarly feedback on students' writing development and independent learning.

These recommendations for future researchers aim to improve studies on the role of technological feedback in writing classes, specifically in the context of EFL.

This chapter demonstrated that Grammarly helped students improve their writing in terms of accuracy, vocabulary, language use, and mechanics. There is still a continuous need for teacher guidance so that feedback remains necessary, and students are directed to use the tool in a more active, critical, and independent manner. Digital feedback combined with a relevant teacher helps develop students' writing and increases their independent learning in the EFL context.

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