The Frequency and Accuracy of Prompts and Suggestions Made by Free Grammarly on Thai University Students' English Writing Errors

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Abstract

This research aims to investigate the capabilities of the Free version of the well-known artificial intelligence (AI) writing assistant, Grammarly, in detecting and correcting writing errors made by Thai EFL students. The sample of 30 Thai students in this research all use Thai as L1. They were enrolled in an English paragraph writing course in an international program at a Thai university. A literature review not only identified and confirmed recurrent errors found in Thai students' EFL texts but also revealed the tendency for contemporary learners to turn to AI software for help. To determine whether Thai EFL students can access reliable and effective assistance through Free Grammarly, the researchers uploaded one paragraph of text written by each student to the platform to determine the types and frequency of errors and the correctness of the editing suggestions offered by the software. The results revealed that Free Grammarly is a capable writing assistant. However, it produced some grammatically and contextually incorrect suggestions. To assist both students and teachers who may not be aware of the program's limitations, the researchers identified and analysed all of the incorrect suggestions made by Free Grammarly on the sample texts. The researchers have also provided in-depth interpretations regarding each error and have offered suggestions for manually editing the text to correct the grammatical and contextual errors made by the program. The researchers have given recommendations for EFL instructors and students regarding using Free Grammarly in the classroom, setting language preferences, making use of its explanations of English grammar, and conducting further research.

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ความถี่และความแม่นยำของการตอบสนองและคำแนะนำจากฟรีแกรมมาลี (Free Grammarly) ในการช่วยแก้ไขข้อผิดพลาดในการเขียนภาษาอังกฤษของนักศึกษาไทยในระดับมหาวิทยาลัย

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บทคัดย่อ

การวิจัยครั้งนี้มีวัตถุประสงค์เพื่อศึกษาความสามารถของปัญญาประดิษฐ์ที่เรียกว่าฟรีแกรมมาลี (Free Grammarly) ในการตรวจสอบและแก้ไขข้อผิดพลาดในการเขียนภาษาอังกฤษของนักศึกษาชาวไทยที่ใช้ภาษาอังกฤษในฐานะภาษาต่างประเทศ กลุ่มตัวอย่างในการวิจัยครั้งนี้คือ นักศึกษาชาวไทยที่ใช้ภาษาไทยเป็นภาษาแม่ และเป็นนักศึกษาที่ได้ลงทะเบียนเรียนในรายวิชาการเขียนย่อหน้าภาษาอังกฤษในหลักสูตรนานาชาติของมหาวิทยาลัยแห่งหนึ่ง จากการทบทวนวรรณกรรมที่เกี่ยวข้องสามารถระบุและยืนยันได้ว่ามีการค้นพบข้อผิดพลาดที่เกิดขึ้นซ้ำ ๆ ในงานเขียนภาษาอังกฤษในฐานะภาษาต่างประเทศของนักศึกษาชาวไทย แต่ก็มีแนวโน้มว่านักศึกษาชาวไทยจะกลับมาใช้ปัญญาประดิษฐ์นี้เพื่อช่วยในงานเขียน เพื่อศึกษาว่านักศึกษาชาวไทยที่ใช้ภาษาอังกฤษในฐานะภาษาต่างประเทศสามารถเข้าถึงการช่วยเหลือที่มีประสิทธิภาพและแม่นยำของปัญญาประดิษฐ์ที่เรียกว่าฟรีแกรมมาลี (Free Grammarly) นั้น ผลงานเขียนย่อหน้าจากนักศึกษาชาวไทยจำนวน 30 ชิ้นได้ถูกอัพโหลดลงไปในปัญญาประดิษฐ์นี้เพื่อระบุประเภทและความถี่ของข้อผิดพลาด รวมทั้งคำแนะนำจากปัญญาประดิษฐ์ดังกล่าว เพื่อช่วยแก้ไขเนื้องานให้ถูกต้อง ผลจากการศึกษาสามารถระบุว่าการทำงานของปัญญาประดิษฐ์ดังกล่าวถูกนำมาใช้เป็นตัวช่วยในการเขียน แต่คำแนะนำที่ปรากฏออกมาจากการประมวลผลของปัญญาประดิษฐ์นี้ก็ยังแสดงถึงข้อผิดพลาดในเชิงบริบทและไวยากรณ์ เพื่อช่วยให้ทั้งนักศึกษาและอาจารย์ผู้สอนได้ตระหนักถึงข้อจำกัดของปัญญาประดิษฐ์นี้ ผู้วิจัยได้ระบุและวิเคราะห์คำแนะนำที่ผิดของตัวอย่างงานเขียนที่มาจากการประมวลผลของปัญญาประดิษฐ์ที่ชื่อฟรีแกรมมาลี (Free Grammarly) นี้ และได้ให้การตีความเชิงลึกเกี่ยวกับข้อผิดพลาด และข้อเสนอแนะในการตรวจสอบความถูกต้องของข้อผิดพลาดในเชิงบริบทและไวยากรณ์ด้วยตัวผู้เขียนเอง นอกจากนี้งานวิจัยชิ้นนี้ผู้เขียนได้สรุปข้อเสนอแนะในการใช้ฟรีแกรมมาลีให้กับอาจารย์และนักศึกษาในชั้นเรียน และการตั้งค่าภาษาของซอฟแวร์ และการใช้ประโยชน์จากเกร็ดความรู้ของฟรีแกรมมาลีนอกจากนี้ยังสามารถใช้ประโยชน์จากข้อแนะนำนี้ในการพัฒนาต่อยอดงานวิจัยได้ในอนาคต

คำสำคัญ: นักศึกษาชาวไทยที่ใช้ภาษาอังกฤษในฐานะภาษาต่างประเทศ ข้อผิดพลาดในการเขียนภาษาอังกฤษ แกรมมาลี ปัญญาประดิษฐ์ การปรับแก้ไขตามเวลาจริง

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Introduction

Writing courses form an invaluable part of the curriculum for many universities offering courses in English as part of an undergraduate English degree, and one of the fundamental skills that students must develop at this level of education is the art of grammatically correct English writing. Having accurate and effective academic English writing skills helps students to express themselves and present information clearly and concisely and in a way that can be more easily understood by the reader. After developing these essential writing skills, students can answer more complex questions set by university instructors in the more advanced courses in the curriculum. Students who are skilful writers can effectively organise their thoughts around a particular topic and have a clearer understanding of how properly structured and grammatically correct texts enhance their chances of earning better grades. Their grammatically accurate sentences and paragraph writing should contribute to well-written essays (Hogue, 2007), and further development of their writing skills will assist them in composing more advanced academic texts, such as research papers, academic articles, and books.

Learners of English as a foreign language (EFL), however, often make repetitive errors early in their writing careers. The influences of the grammar and structure of the student's native language on the target language often trigger grammar, spelling, and vocabulary errors (Bennui, 2016). It is common to use the term "L1 interference" when referring to these influences (Rattanadilok & Bidin, 2016). Therefore, these EFL students need to receive timely instruction focused on reducing and eliminating the common errors evident in their first and second-year work. Traditionally, the course instructor reviews each student's work and gives feedback so that the student can make necessary improvements to the text.

In the last decade, however, circumstances have changed significantly. Besides having an instructor in the classroom, EFL students can now find an array of online free or subscription packages offering writing assistance and instruction through artificial intelligence (AI) programs, and one such program is the increasingly popular cloud-based typing assistant known as Grammarly. Grammarly's product aims to offer EFL learners, native English speakers, and professionals assistance with many aspects of writing. It also offers users a choice of Free, Premium, and Business plans.

Because of the increasing use of Free Grammarly among EFL learners, the researchers believed it was significant to investigate Free Grammarly's popularity, error detection capabilities, and efficacy for Thai EFL university students. For the benefit of course instructors and Thai EFL students, this research aimed to provide an in-depth analysis of the errors found in Thai EFL students' writing by the Free version of Grammarly AI and to examine the accuracy of the feedback and suggestions given by the AI for correcting the students' texts.

Literature Review

Thai EFL Learners' Writing Errors

According to Al-Seyabi and Tuzlukova (2014), the first obstacle students will face is how to begin the writing process. Bayat (2014), who agrees with Hogue (2017), suggested that students should focus more on writing as a process involving a series of steps. Bayat (2014) implied that students tended to approach writing in an unstructured and erratic manner, often without any planning or outlining before beginning the process of writing. Tarin and Yawiloeng (2022) also highlighted disorganisation in their study of EFL writing samples. Any instructor who regularly teaches writing courses at university level would likely agree that disorganised ideas in writing are an issue with both native speakers of English and EFL learners. In addition, a significant number of EFL students also have issues with vocabulary (Abdul-Kareem 2014). This is understandable since acquiring vocabulary and developing grammar and pronunciation are essential for learning any new language (Watcharapunyawong & Usaha, 2013).

Regarding mechanics, such as spelling and punctuation, Thai EFL learners make frequent mistakes when spelling English words (Waelateh et al., 2019). EFL students also have particular difficulty with the placement of punctuation, especially in their use of commas and periods which may be unpredictably included or omitted in their writing (Al-Zayad, 2018). In addition, Khumphee and Yodkamlue (2017) discovered a high volume of incorrectly structured simple, compound, and complex sentences written by Thai EFL students which demonstrated the inability of many Thai students to use English punctuation marks appropriately.

Roongsitthichai et al. (2019) highlighted capitalisation errors as the most frequent issue in Thai students' writing. The rules of capitalisation in English can be very challenging to master.

Some of the more advanced writers still make errors due to the complexity of English capitalisation rules.

According to Phettongkam (2017), any literature review of verb form errors will be another area where Thai EFL learners face particular challenges. Verb form errors were the third most common mistake revealed in the results of that research. Suraprajit (2021) observed that the most frequent errors made by Thai students were omission of articles, preposition errors, fragmentation, and pronoun misuse.

Phoocharoensil et al. (2016) recommended that the production of English writing errors by Thai students should signal the instructor to take appropriate action by giving accurate, timely feedback on students' writing. This feedback will form a crucial part of the teaching and learning process (Sermsook et al., 2017). However, in the contemporary classroom environment, where access to a smartphone, tablet, computer and an internet connection is readily available, students and professionals are turning to AI for writing assistance in increasing numbers (Visaltanachoti et al., 2021).

Using AI Programs for English Writing Assistance

For Thai EFL students, the instructor's availability may drive the need for AI assistance with writing (Zhang, 2017). The quality and knowledge of the instructor (Ghufron & Rosyida, 2018) and the relationship between the instructor and the students (Ma et al., 2019) also have an impact on the student's decision to use AI. In addition, some students are not brave enough to raise a question in the classroom environment due to the potential loss of face (Tananuraksakul, 2012).

When looking for a good source of AI for writing assistance, students will quickly discover that a number of options are readily available to download (Bouchoux, 2019), but one highly rated choice they are likely to make is the Free version of Grammarly (Mammadova, 2019). Grammarly is an award-winning generative AI assistance and writing program, sometimes referred to as an automated written corrective feedback (AWCF) tool (Ranalli & Yamashita, 2022). Grammarly offers suggestions to the writer in either real-time or through subsequent uploading of the text to the platform (Fitria, 2021). Lytvyn (2022), the co-founder of Grammarly, claimed it went from 1 million daily active users in 2015 to 30 million in 2020. According to

Mammadova (2019), online grammar and software checkers are now playing a growing role in the educational process, especially with technologically-minded millennial students (Fitria, 2021) and students with a desire to receive feedback from both the instructor and the AI (Thi & Nikolov, 2022). Additionally, Jeanjaroonsri (2023) revealed that more than 50% of Thai students use Grammarly for assistance with their English writing.

The Efficacy of Free Grammarly

Fahmi and Cahyono (2021) claimed that Free Grammarly enhanced EFL students' comprehension of their writing mistakes, and it offered good explanations for learners. In the Free version, assistance is available for 150 types of errors which make it a powerful tool for learners of English grammar (Zhang et al., 2020). Moreover, Fitria (2021) discovered that their sample of students' writing test scores increased from 34 out of 100 before using Grammarly to 77 out of 100 after using Grammarly. Fitria (2021) also claimed that Free Grammarly detected and corrected prepositional errors, irregular verb conjugations, inappropriate use of nouns, and also corrected words that were misused. University instructors who participated in research conducted by Yousofi (2022) mentioned betterment, confidence, improvements in vocabulary usage, and time savings as some of the benefits for students who use Grammarly in conjunction with instructor input.

Since Free Grammarly is easy to access through a personal device and a local internet connection, and Thai EFL students appear to be doing so in growing numbers, these researchers, as faculty members responsible for the curriculum in a Thai international university, were driven to answer two fundamental questions.

Research Questions

1: What are the most common errors detected by the Free version of Grammarly in Thai EFL students' writing samples at university level?

2: How accurately does Free Grammarly AI provide grammar prompts and corrections for the writing errors that it identifies in Thai EFL writing samples?

Methods

Sampling

Thirty participants were purposively selected for assessment in the study. All 30 were Thai undergraduate students who studied in the first semester of their second year at a public university in Bangkok, Thailand. The ages of the participants ranged from 19 to 25 years. The researchers selected the participants based on their enrolment as EFL learners in an English paragraph writing course as part of an international program for a Bachelor of Arts in English degree. The title of the course is *English Sentences and Short Paragraphs*.

Three separate batches of students were enrolled in the course during the academic years of 2020 to 2022, resulting in the total of 30 Thai EFL learners' writing samples being assessed. Each one of the three courses totalled 48 hours, and the same instructor taught each course using the same textbook, teaching methodology, and writing prompt to collect the written samples. It should be noted that the participants in the courses were a mixture of Thai and foreign students from Asia, North America, and Europe, some of whom are native speakers of English; however, the researchers assessed only the Thai EFL students' English sentence and paragraph writing errors for the purposes of this research. The purpose of selecting only Thai students was to ensure that the study examined writing errors only from learners sharing a common L1 background. The skill levels of the Thai EFL participants ranged from pre-intermediate to low-advanced. The students who attended this course are required to have at least a 5.0 IELTS score based on the Common European Framework (British Council, 2021), or they must have taken an equivalent assessment and entrance examination at the university before they joined this course. In total, there were 43 course lecture and practice hours with two hours for a mid-course examination and three hours for a final examination.

Data Collection

The instructor asked 30 Thai EFL students to write and submit a piece of academic writing for the instructor to assess. The topic was students' high school teachers. The instructor assigned the following writing task:

"Write a short paragraph describing one of your teachers from high school. Use the correct page format and font according to the models in your textbook: Times New Roman 12
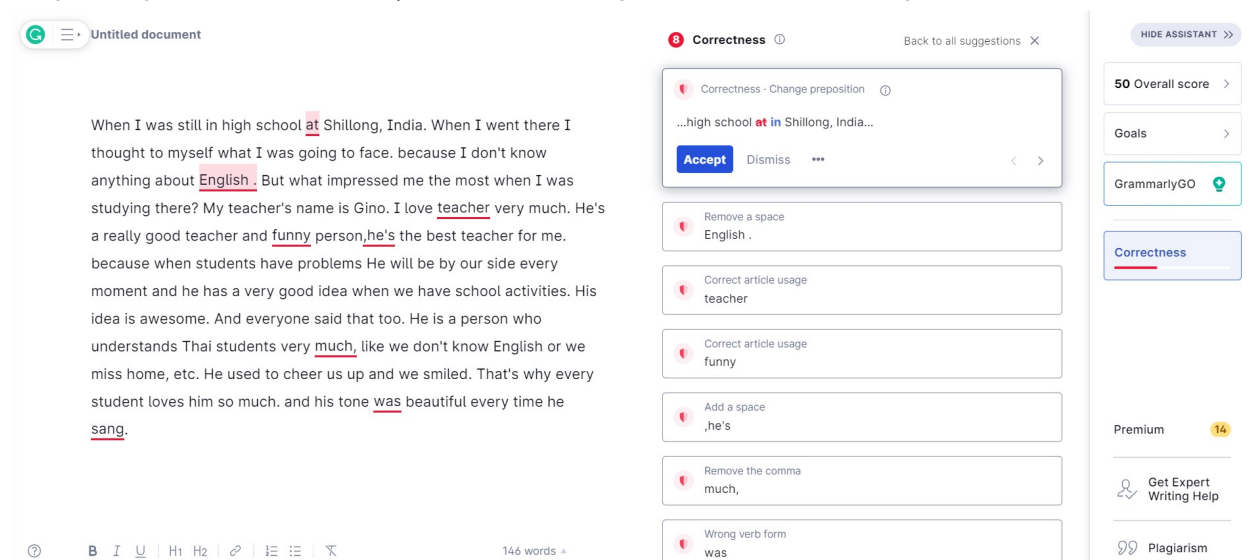
with double-line spacing. Your paragraph must include a topic sentence with a clear controlling idea, a body with three main points, at least one but not more than two supporting sentences offering additional information for each main point, and a concluding sentence that either restates the topic sentence or summarises the main ideas in the paragraph. Sentence types can be simple, compound, or complex. Use appropriate transitions throughout the text. Accurate spelling, grammar, and mechanics will improve your overall score. Do not exceed 75 per cent of one A4 page for this activity." The instructor gave a page percentage on this occasion to deter students from focusing on an exact word count, rather than the writing itself, and because the researchers' objective was to collect authentic Thai writing samples, the instructor requested that the students were not to use AI during the writing exercise. Each student then typed one response into a blank Google document in Google Classroom.

Data Analysis

During the analysis, the researchers uploaded all 30 paragraphs to the Free version of Grammarly on the same day to ensure that all the responses were analysed by the same version of the Free Grammarly software. After uploading all 30 paragraphs to Free Grammarly, the researchers opened each one individually to reveal Free Grammarly's real-time editing screen (See Figure 1).

Figure 1

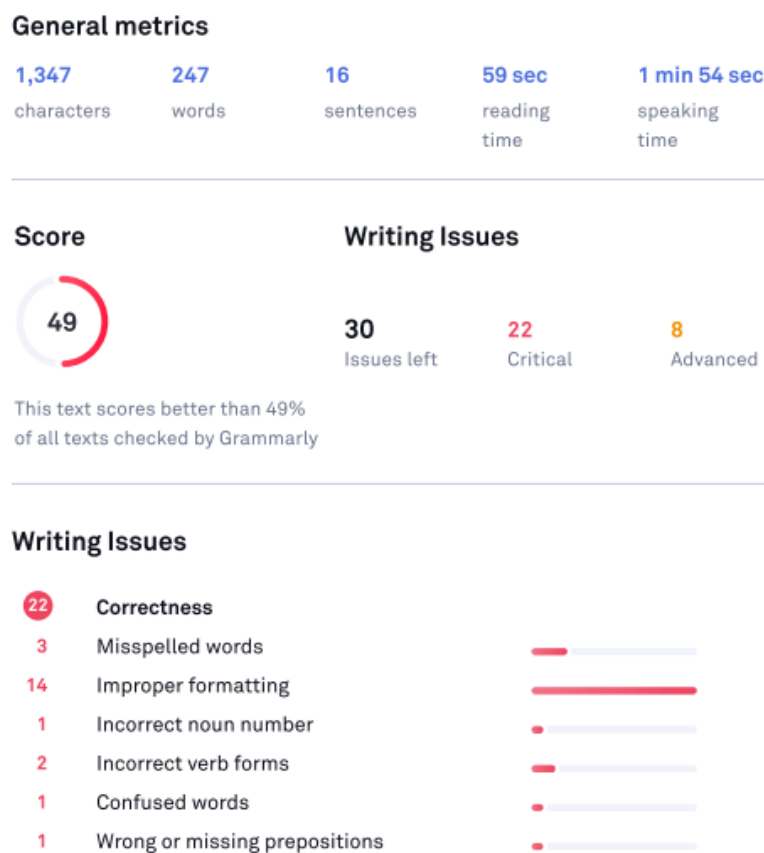*Snapshot of the Free Grammarly Real-Time Editing Screen (Correctness Option)*

Note: Image from Free Grammarly editing screen, 2023, https://app.grammarly.com

As illustrated in Figure 1, the editing screen has three main sections. On the left of the screen is the student's original text with all the student's errors underlined in red. Free Grammarly categorises these errors and uses the term "Correctness" to summarize the alerts. Offset to the centre-right are the suggestions for editing the text systematically, and as each word or phrase is being edited in real-time, further suggestions and a complete description of the grammar concept and the error are offered by the AI. On the far right of the screen is the Free Grammarly assistant, which offers options for further analysis and goal adjustment. Clicking on the "Overall score" button will reveal the option to download a free five-page report in which the writing errors are arranged into distinctive categories by the software (See Figure 2).

Figure 2

Example of a Single Free Grammarly Report: Summary Page and Writing Issue Categories

Note: Image from Free Grammarly editing screen, 2023, https://app.grammarly.com

For this experiment, the researchers focused on using the "Correctness" and "Clarity" functions of Free Grammarly (See user editing options in Figure 1) since most of the other options are part of a premium package which requires a subscription that many Thai students are unlikely to choose. By clicking on the Free Grammarly "Correctness" category alert button, the researchers were able to work systematically through each paragraph by using the real-time editing suggestions made by Free Grammarly for each particular part of the text. Each time an edit was made, the page refreshed and newly-assessed writing suggestions appeared.

The researchers added the exact instruction for each Grammarly suggestion to the examples in Tables 2 and 3. The researchers then recorded the student's text before and after each real-time edit and carefully noted the correctness or incorrectness of each suggested amendment so that the accuracy of the feedback given by the Free Grammarly could be established for Thai EFL learners using the program for writing-error correction.

Results

Free Grammarly identified a total of 226 Thai EFL students' writing issues across 30 short paragraphs. Free Grammarly suggested there were 217 correctness issues and 9 clarity (wordy sentence) issues (See Table 1).

Table 1

Totals for All 30 Free Grammarly Report Summary Pages and Writing Issue Categories

Grammarly Heading	Grammarly Description	Issues Identified
Correctness	Comma misuse within clauses	35
	Improper formatting	29
	Wrong or missing prepositions	27
	Determiner use (a/an/the/this, etc.)	24
	Confused words	20
	Incorrect verb forms	18
	Mixed dialects of English	16
	Incorrect noun number	11
	Pronoun use	11
	Misspelled words	10
	Faulty subject-verb agreement	6
	Conjunction use	6

	Punctuation in compound/complex sentences	2
	Misuse of semicolons, quotation marks, etc.	1
	Modal verbs	1
Clarity	Wordy sentences	9
Total Issues Found		226

Note: "Correctness" and "Clarity" are Free Grammarly terms which it uses as major headings for the different writing issues that it has identified for further investigation and consideration by the writer (See Figure 2).

        The researchers broke down the results of the Thai EFL students' writing issues further and arranged them in Tables 2 and 3. Table 2 illustrates only the successfully applied feedback prompts and corrections. The first column shows an exact copy of the feedback prompt that Free Grammarly gave in real-time. The researchers grouped the errors and show each category in parentheses. The second column shows the student's original text before applying the editing suggestion, and the third column shows the student's text exactly as it appeared after applying the suggested change successfully.

Table 2

Examples of Successful Free Grammarly Feedback Prompts and Suggestions

Examples of Grammarly Feedback Prompts (Determiner Usage)	Student's Original Text	Student's Text After Applying Grammarly Feedback Successfully
It seems that there is an article usage problem here.	It was <u>very</u> rough time for me.	It was a very rough time for me.
The word *the* may be incorrect in this context. Consider changing it.	I gave him <u>the</u> homework.	I gave him my homework.
The noun phrase (highlighted words) seems to be missing a determiner before it. Consider adding an article.	She is <u>strict</u> teacher but very helpful and patient.	She is a strict teacher but very helpful and patient.
The indefinite article, *a*, may be redundant when used with the uncountable noun *treatment* in your sentence. Consider removing it.	I need to go to hospital for <u>a treatment</u>.	I need to go to hospital for treatment.

Examples of Grammarly Feedback Prompts (Pronoun Usage)	Student's Original Text	Student's Text After Applying Grammarly Feedback Successfully
It appears that the pronoun *my* may not fit this context. Consider replacing it with an article.	High school is one of <u>my</u> most memorable times of my life so far.	High school is one of the most memorable times of my life so far.
It seems that there is a pronoun problem here.	She explains <u>us</u> all the topics so that we understand the concepts clearly.	She explains all the topics so that we understand the concepts clearly.
It appears that the subject pronoun *she* and the verb *try* are not in agreement. Consider changing the verb.	She always <u>try</u> to help.	She always tries to help.
Examples of Grammarly Feedback Prompts (Conjunction Usage)	Student's Original Text	Student's Text After Applying Grammarly Feedback Successfully
It seems that conjunction use may be incorrect here.	He is not <u>that scary</u> as people always say.	He is not as scary as people always say.
Examples of Grammarly Feedback Prompts (Noun Usage)	Student's Original Text	Student's Text After Applying Grammarly Feedback Successfully
It seems that this noun form may be incorrect.	That <u>school</u> name is Princess Chulabhorn.	That school's name is Princess Chulabhorn.
It seems that *works* may not agree in number with other words in this phrase.	When I have problems with my <u>works</u>, ...	When I have problems with my work, ...
Examples of Grammarly Feedback Prompts (Preposition Usage)	Student's Original Text	Student's Text After Applying Grammarly Feedback Successfully
It seems that preposition use may be incorrect here.	I couldn't concentrate <u>at</u> any single thing during the day.	I couldn't concentrate on any single thing during the day.
Examples of Grammarly Feedback Prompts (Verb Usage)	Student's Original Text	Student's Text After Applying Grammarly Feedback Successfully
It seems that the verb *know*	When a student <u>know</u> the	When a student knows the

does not agree with the subject. Consider changing the verb form.	answer, …	answer, …
The singular verb **was** does not appear to agree with the plural subject **students**. Consider changing the verb form for subject-verb agreement.	When his students <u>was</u> misbehaving in the class, …	When his students were misbehaving in the class, …
It appears that the verb **believed** is incorrectly used with the helping verb **does**. Consider changing it to the base form.	My teacher does <u>believed</u> in strict rules.	My teacher does believe in strict rules.

Examples of Grammarly Feedback Prompts (Verb Usage Cont.)	Student's Original Text (Cont.)	Student's Text After Applying Grammarly Feedback Successfully (Cont.)
It appears that your sentence or clause uses an incorrect form of the verb **judge.** Consider changing it.	The fear that we are going to be <u>judge</u>.	The fear that we are going to be judged.
The verb **came** after the modal verb **would** does not appear to be in the correct form. Consider changing the verb form.	… would <u>came</u> from him.	…would come from him.
The verb **listen** may be in the wrong form after the preposition **for**. Consider changing it to the gerund form.	The case for <u>listen</u> to stories from both sides.	The case for listening to stories from both sides.
To participate doesn't seem to work here.	Students <u>to participate</u> in activities…	Students participating in activities…
It appears that the form of the verb **manage** does not work with **was** in this sentence.	He <u>was manage</u> badly behaved students…	He managed badly behaved students…
It appears that the verb **said** should be in the base form as part of the to-infinitive following **started**.	I started to <u>said</u> something…	I started to say something…

Consider changing the verb form.		
The verb *being* appears to be unnecessary here.	All in all, <u>being</u> a good teacher must have many qualifications.	All in all, a good teacher must have many qualifications.
The past participle verb *seen* has been used without an auxiliary verb. Consider adding one or using the past simple instead.	I <u>never seen</u> him giving any kind of punishment.	I have never seen him giving any kind of punishment.
It seems that you are missing a verb. Consider adding it.	I had to <u>treated</u> in hospital.	I had to be treated in hospital.

Examples of Grammarly Feedback Prompts (Capitalisation)	Student's Original Text	Student's Text After Applying Grammarly Feedback Successfully
The pronoun *I* should always be capitalised.	He is happy when <u>i</u> tell him the truth.	He is happy when I tell him the truth.
If you don't want *japanese* to be marked as misspelled in the future, you can add it to your personal dictionary.	She is <u>japanese</u>.	She is Japanese.

Examples of Grammarly Feedback Prompts (Hyphenation)	Student's Original Text	Student's Text After Applying Grammarly Feedback Successfully
The word (highlighted hyphenated words) doesn't seem to fit this context. Consider replacing it with a different one.	After the <u>final-exam</u>, …	After the final exam, …
It seems that (highlighted words) is missing a hyphen. Consider adding the hyphen(s).	… for being a <u>hard working</u> student.	…for being a hard-working student.

Examples of Grammarly Feedback Prompts	Student's Original Text	Student's Text After Applying Grammarly Feedback

(Confused Words)		Successfully
The word (highlighted words) doesn't seem to fit this context. Consider replacing it with a different one.	She is the kindest teacher I've <u>never</u> seen.	She is the kindest teacher I've ever seen.
Examples of Grammarly Feedback Prompts (Misspelled Words)	**Student's Original Text**	**Student's Text After Applying Grammarly Feedback Successfully**
It appears that the verb ***teached*** is misspelled. Consider changing the spelling.	He is a fantastic teacher who <u>teached</u> me well.	He is a fantastic teacher who taught me well.
Everytime is not a word. Replace this with the two separate words – ***every time***.	I have problems <u>everytime</u>…	I have problems every time…
Examples of Grammarly Feedback Prompts (Misspelled Words Cont.)	**Student's Original Text**	**Student's Text After Applying Grammarly Feedback Successfully (Cont.)**
The spelling of (highlighted word) is a non-British variant. For consistency, consider replacing it with the British English spelling.	Wan-Ali is one of my <u>favorite</u> teachers.	Wan-Ali is one of my favourite teachers.
Examples of Grammarly Feedback Prompts (Period Usage)	**Student's Original Text**	**Student's Text After Applying Grammarly Feedback Successfully**
It appears that you have improperly spaced some punctuation. Consider adding/deleting a space.	…influence on us.<u>He</u> often tells us that…	… influence on us. He often tells us that…
The abbreviated title ***Mrs.*** seems to be punctuated incorrectly. Consider changing the punctuation.	<u>Mrs.</u> Noudee was my teacher in grade 11 and grade 12.	Mrs Noudee was my teacher in grade 11 and grade 12. (British English)
Examples of Grammarly Feedback Prompts (Comma Usage)	**Student's Original Text**	**Student's Text After Applying Grammarly Feedback Successfully**
It appears that you are missing a	<u>Later on</u> my friend became a	Later on, my friend became a

comma after the introductory phrase *Later on*. Consider adding a comma.	good student.	good student.
It appears that you are missing punctuation with direct speech. Review the rules and consider adding the appropriate mark.	He <u>said</u> "If you are depressed, why don't you…"	He said, "If you are depressed, why don't you…"
It appears that you have an unnecessary comma in a compound predicate. Consider removing it.	The teacher called <u>us,</u> and invited us to join him.	The teacher called us and invited us to join him.
It appears that you have an unnecessary comma before the dependent clause marker *if.* Consider removing the comma.	You would get the <u>blame,</u> if you didn't pay attention.	You would get the blame if you didn't pay attention.

Examples of Grammarly Feedback Prompts (Wordy Sentences)	Student's Original Text	Student's Text After Applying Grammarly Feedback Successfully
It appears that (highlighted word or phrase) may be unnecessary in this sentence. Consider removing it.	…to check if I <u>really</u> understood the lesson.	…to check if I understood the lesson.
The phrase (highlighted phrase) may be unnecessarily wordy. Consider changing the wording.	She always <u>gives us the opportunity</u> to increase…	She always allows us to increase…
The phrase *give advice to* may be unnecessarily wordy. Consider replacing the noun with a corresponding verb.	He will always <u>give advice to</u> students.	He will always advise students.
Personal may be redundant.	She also asked about my <u>personal</u> health	She also asked about my health.
Examples of Grammarly Feedback Prompts (Formatting)	Student's Original Text	Student's Text After Applying Grammarly Feedback Successfully
It appears that you have an extra	The subjects he taught were	The subjects he taught were

space between the words *there* and *were*. Consider removing the extra space.	very easy to understand, but <u>there were</u> still some puzzling points.	very easy to understand, but there were still some puzzling points.

Table 3 shows only the feedback prompts and corrections that were applied unsuccessfully. The first column shows an exact copy of the feedback prompt given by Free Grammarly in real-time. The researchers grouped the errors, and each category is shown in parentheses. The second column shows the student's original text before applying the editing suggestion, and the third column shows the student's text exactly as it appeared after applying the suggested change unsuccessfully.

Table 3

Unsuccessful Free Grammarly Feedback Prompts and Suggestions

Examples of Grammarly Feedback Prompts (Determiner Usage)	Student's Original Text	Student's Text After Applying Grammarly Feedback Unsuccessfully
It seems that there is an article usage problem here.	He teaches English, and he has <u>master's</u> or postgraduate degrees in both history and English.	He teaches English, and he has a master's or postgraduate degrees in both history and English.
It seems that there is an article usage problem here.	After my efforts and <u>the help</u> from her, I finally passed the exam.	After my efforts and help from her, I finally passed the exam.
The word *the* may be incorrect in this context. Consider changing it.	One of <u>the</u> best teachers of mine in high school is...	One of my best teachers of mine in high school is...
Examples of Grammarly Feedback Prompts (Pronoun Usage)	Student's Original Text	Student's Text After Applying Grammarly Feedback Unsuccessfully
It seems that there is a pronoun problem use problem here.	We can ask <u>her</u> directly without the fear that we are going to be judged.	We can ask them directly without the fear that we are going to be judged.
It appears you have used the object pronoun *him* in a subjective position. Consider changing it.	One impressive thing I received from <u>him</u> is that day.	One impressive thing I received from he is that day.
Examples of Grammarly	Student's Original Text	Student's Text After Applying

Feedback Prompts (Noun Usage)		Grammarly Feedback Unsuccessfully
It seems that *classes* may not agree in number with other words in this phrase.	..., so we enjoy her class more than any other subject <u>classes</u>.	..., so we enjoy her class more than any other subject class.
Examples of Grammarly Feedback Prompts (Preposition Usage)	**Student's Original Text**	**Student's Text After Applying Grammarly Feedback Unsuccessfully**
It seems that preposition use may be incorrect here.	Even though I graduated <u>for</u> 3 years, I always…	Even though I graduated 3 years, I always…
Examples of Grammarly Feedback Prompts (Verb Usage)	**Student's Original Text**	**Student's Text After Applying Grammarly Feedback Unsuccessfully**
The plural verb *start* does not appear to agree with the singular subject *a good person*. Consider changing the verb form for subject-verb agreement.	… but also the lessons of being a good person that <u>start</u> from myself.	…but also the lessons of being a good person that starts from myself.
It appears that the verb *know* does not agree with the subject. Consider changing the verb form.	After Ajarn Chan <u>know</u> the story,…	After Ajarn Chan knows the story,…
Examples of Grammarly Feedback Prompts (Misspelled Words)	**Student's Original Text**	**Student's Text After Applying Grammarly Feedback Unsuccessfully**
The word *Mathematic* doesn't seem to fit this context. Consider replacing it with a different one.	Mrs. Treechada, who teaches us <u>Mathematic</u>,…	Mrs. Treechada, who teaches us Mathematics,…
The word Enow doesn't seem to fit this context. Consider replacing it with a different one.	Mr <u>Enow</u> was always trying to understand his students.	Mr Snow was always trying to understand his students.
The spelling of (highlighted word) is a non-British variant. For consistency, consider replacing it with the British English spelling.	She is the <u>counselor's</u> teacher in my class, and she…	She is the counsellor's teacher in my class, and she…

Examples of Grammarly Feedback Prompts (Comma Usage)	Student's Original Text	Student's Text After Applying Grammarly Feedback Unsuccessfully
When speaking directly to people, their names must be set off by commas. Consider adding the commas.	My first Korean Language teacher is Korean, but she can speak a bit <u>Thai</u>.	My first Korean Language teacher is Korean, but she can speak a bit, Thai.
It appears that you are missing a comma after the introductory phrase *Last.* Consider adding a comma.	<u>Last</u> of all, it is confidence when you present in front of the classroom.	Last, of all, it is confidence when you present in front of the classroom.
It appears that you have an unnecessary comma before the dependent clause marker *if.* Consider removing the comma.	When it is a presentation <u>day,</u> if you are the first to present and show your confidence with the right information, you will get better points.	When it is a presentation day if you are the first to present and show your confidence with the the right information, you will get better points.

In summary, Free Grammarly identified 226 Thai EFL students' writing issues. Free Grammarly made a total number of 211 correct prompts and suggestions and a total number of 15 incorrect prompts and suggestions. The results are shown in Table 4.

Table 4

Summary of Free Grammarly's Error Detection Success Rate by Writing Issue Category

Grammarly Description	Correct Detection	Incorrect Detection	Total
Comma misuse within clauses	32	3	35
Improper formatting	29	0	29
Wrong or missing prepositions	26	1	27
Determiner use (a/an/the/this, etc.)	21	3	24
Confused words	20	0	20
Incorrect verb forms	18	0	18
Mixed dialects of English	16	0	16
Incorrect noun number	10	1	11
Pronoun use	9	2	11
Misspelled words	7	3	10
Faulty subject-verb agreement	4	2	6

Conjunction use	6	0	6
Punctuation in compound/complex sentences	2	0	2
Misuse of semicolons, quotation marks, etc.	1	0	1
Modal verbs	1	0	1
Wordy sentences	9	0	9
Totals	211	15	226

The researchers summarised the highest number of writing issues detected by Free Grammarly using the Free Grammarly term "Comma misuse within clauses". There were 35 suggestions in total. However, when applying 28 of these suggestions, the researchers discovered that this statement was misleading because a significant number of the "Comma misuse within clauses" suggestions turned out to be period errors which followed short titles such as Mr., Mrs., Dr., etc. Nonetheless, this did not detract from Free Grammarly's accuracy in detecting an error at that particular point in the text, but a small software update by Grammarly, such as "Period misuse with titles", would offer users more clarity. It should also be noted that Free Grammarly analyses period misuse with titles in two distinctly different ways, depending on which dialect of English the user has chosen. If it is set to British English, it will allow the period following an abbreviated title to be omitted. In contrast, if it is set to American English, it will not allow the period following an abbreviated title to be omitted. In all cases, Free Grammarly offers the user a clear explanation. It is also worth noting that the students wrote about their favourite teachers. For this reason, a significant number of abbreviated titles appeared in the students' texts. Of the remaining seven "Comma misuse within clauses" suggestions, five were related to missing commas after introductory words and phrases such as transitions and preposition phrases which are common Thai EFL learners' errors. One was related to a comma inappropriately placed in a compound predicate, and one was related to an erroneous suggestion made by Free Grammarly which is shown in Table 3 in the Korean language teacher example.

The researchers summarised the second highest number of writing issues detected by Free Grammarly using the Free Grammarly term "Improper formatting". There were 29 suggestions in total. All of these errors were spacing errors. A space was either missing or wrong

before or after a punctuation mark, or there were too many spaces between certain words. Free Grammarly did a perfect job in identifying and correcting all of these formatting errors.

The researchers summarised the third highest number of writing issues detected by Free Grammarly using the Free Grammarly term "Wrong or missing prepositions". There were 27 suggestions in total, thus supporting the research that Suraprajit (2021) conducted showing similar results. Free Grammarly did a remarkable job in identifying and correcting all but one of the Thai EFL learners' preposition errors. Table 3 shows the errant one.

Determiner use was the fourth highest in the number of writing issues Free Grammarly detected, and the researchers summarised these using Free Grammarly's term "Determiner use (a/an/the/this, etc.)". There were 24 suggestions in total, which is also in line with suggestions that Suraprajit (2021) presented. As shown in Table 3, Free Grammarly successfully identified missing or incorrect definite and indefinite articles along with suggestions for substituting pronouns for determiners and vice versa. Free Grammarly provided the correct solutions for 21 of the 24 Thai EFL learners' determiner errors. Table 3 shows the errant three.

Confused words appeared next in the error ranking for Thai EFL students. There were a total of 20 suggestions in total. Grammarly rightly suggested that English has a lot of commonly confused words, such as advise/advise, affect/effect, complement/compliment, farther/further, imply/infer, etc. Consequently, Free Grammarly did a perfect job in identifying and correcting all of these confusing words for the user.

Incorrect verb forms, which Phettongkam (2017) made note of, appeared slightly lower down in the error ranking than anticipated. Nonetheless, Free Grammarly offered a total of 18 suggestions. Free Grammarly identified and successfully corrected, in real time, all misuses of the past and present participles, helping verbs, modal verbs, and verb conjugation. Free Grammarly also detected a few missing or unnecessary verbs in the students' texts under this category and achieved successful editing in all cases.

Mixed dialects of English ranked as the seventh most common error in the Thai EFL students' writing errors. In this category, Free Grammarly identified different parts of the text where the writer had used a mixture of British and American spellings and vocabulary. All of the editing suggestions were successful.

Pronoun use and incorrect noun number both came next in the ranking with a total of 11 suggestions each from Free Grammarly. When examining pronoun use, Free Grammarly looks for appropriate use of the subjective and the objective cases of personal pronouns. It also examines the writer's use of relative, demonstrative, indefinite, reflexive, and possessive pronouns. In all but two cases, shown in Table 3, Free Grammarly made the correct suggestions. When examining incorrect noun number, Free Grammarly will scan for errors in the use of countable, uncountable, possessive, subjective, and objective noun forms. In this category, only one of Free Grammarly's suggestions came under scrutiny.

During the real-time editing process for misspelled words, Free Grammarly was able to detect and correct incorrectly compounded words such as everytime vs. every time, incorrect or missing hyphenation, and incorrect capitalisation. Free Grammarly offered a total of 10 suggestions in this area. This number is less significant than that which Waelateh et al. (2019) reported, but they based their research on hand-written work, which may have increased the number of spelling mistakes detected. In this part of this experiment, Free Grammarly did show weaknesses in its detection of incorrect capitalisation. Three of its suggestions were incorrect. Capitalisation remains a significant problem area for Thai EFL students as highlighted by Roongsitthichai et al. (2019).

Free Grammarly's detection of faulty subject-verb agreement returned four correct suggestions out of six. The two unsuccessful corrections are shown in Table 3.

For the remaining categories, identified by Free Grammarly as "Conjunction use', "Punctuation in compound/complex sentences", "Misuse of semicolons, quotation marks, etc.", "Modal verbs", and "Wordy sentences", Free Grammarly did not make any incorrect suggestions.

Discussion

The aim of this study was to gain a deeper understanding of the most common writing errors that Thai EFL students make and to establish whether or not Free Grammarly can provide accurate prompts and suggestions for real-time editing.

During this research, Free Grammarly did notably well in identifying and categorising many of the common errors found in Thai EFL students' writing at university level. The results

provided supporting evidence that Free Grammarly successfully applied a significantly high number of its writing assistance suggestions. Of its 226 suggestions and corrections, Free Grammarly gave 211 logical, well-explained, and applicable real-time suggestions and corrections. Only the 15 suggestions, shown in Table 3, were invalid. For this study, this represents a success rate of 93.36% for Free Grammarly AI writing assistance corrections to Thai EFL learners' texts in a university setting.

Free Grammarly's highest success rates occurred at relatively high rates where there were at least 10 correct detections and 1 or 0 incorrect detections, Free Grammarly's AI performed well. These types of errors were "Improper formatting", "Wrong or missing prepositions", "Confused words", "Incorrect verb forms", and "Incorrect noun number". This pattern appears to be consistent with what Bennui (2016) and Rattanadilok and Bidin (2016) claimed in their research which stated that interference from the Thai student's L1 is likely to generate these types of errors. Suraprajit (2021) corroborated this with an assertion that there was a significant frequency among Thai students to make errors with articles, prepositions, fragments, and pronouns. Free Grammarly's success rate in this area is significant as it is able to accurately identify arguably some of the most problematic areas for Thai students' editing their writing.

Having focused on what Free Grammarly did particularly well, it is prudent to focus on the seemingly incorrect suggestions that Free Grammarly made. In this section, the researchers have discussed a few of the main areas where Free Grammarly's AI made incorrect detections and have provided further detail on the full range of errors that Free Grammarly's AI made.

Comma misuse within clauses was one particular area where there was a high rate of student errors made. The Free Grammarly AI made three incorrect error detections in this area. These findings are consistent with research Al-Zayad (2018) conducted showing that punctuation is a significant problem for Thai EFL students. In their past research, Khumphee and Yodkamlue (2017) also showed there was high number of punctuation errors and the unpredictable way in which Thai EFL students punctuate their writing. This high rate of student errors in their writing could pose a problem for the AI to catch all the errors.

Another area where Free Grammarly made errors is "Misspelled words" which includes capitalisation. Roongsitthichai et al. (2019) pointed out that capitalisation continues to be an issue with Thai EFL students. It may be worth noting that much of the prior research these authors have cited in this study comes from Thai authors. The analysis of data in this study shows examples where the Free Grammarly AI is making incorrect detections for misspelled words which are based on Thai proper nouns such as the names of people. It appears that the AI is unfamiliar with these words and incorrectly marks them as errors.

It should be noted that Free Grammarly works in real-time and recalculates its suggestions each time the user makes a change to the text. The following is a critical analysis of the 15 problematic areas that remained when all of Free Grammarly's suggestions across all 30 sample paragraphs had been applied. The researchers have offered recommendations for manually editing the problematic areas of text in each category.

Determiner Usage Recommendation 1

| It seems that there is an article usage problem here. | Text before editing:
He teaches English, and he has <u>master's</u> or postgraduate degrees in both history and English. | Text after editing:
He teaches English, and he has a master's or postgraduate degrees in both history and English. |

In the opinion of these researchers, the student's intention appears to be the use of **master's or postgraduate** as alternative adjectives for the countable noun **degrees**. If this is the case, an article is not required.

Determiner Usage Recommendation 2

| It seems that there is an article usage problem here. | Text before editing:
After my efforts and <u>the help</u> from her, I finally passed the exam. | Text after editing:
After my efforts and help from her, I finally passed the exam. |

In the opinion of these researchers, neither the original compound object of the preposition **my efforts and the help** nor the Free Grammarly suggestion **my efforts and help** work well in this context. It would be better to change the article **the** to the preposition **with** to

form three separate preposition phrases: *After my efforts and with help from her,* I finally passed the exam.

Determiner Usage Recommendation 3

The word *the* may be incorrect in this context. Consider changing it.	Text before editing: One of <u>the</u> best teachers of mine in high school…	Text after editing: One of my best teachers of mine in high school…

In the opinion of these researchers, although the student's original text is a bit unclear, Free Grammarly's suggestion to change the definite article *the* to the possessive *my* does not work well with the preposition phrase *of mine.* After recalculating in real-time, Free Grammarly should have suggested the removal of the preposition phrase *of mine,* leaving the noun phrase *One of my best teachers in high school* as the new subject of the sentence.

Pronoun Usage Recommendation 1

It seems that there is a pronoun problem here.	Text before editing: We can ask <u>her</u> directly without the fear that we are going to be judged.	Text after editing: We can ask them directly without the fear that we are going to be judged.

In the opinion of these researchers, the context surrounding the sentence clearly indicated that the pronoun *her* referred to a single female teacher and not multiple teachers or students. The student used the pronoun *her* four times and the pronoun *she* three times in the surrounding text. However, Free Grammarly only made one suggestion to change the singular object pronoun *her* to the plural object pronoun *them*. This would create faulty parallelism in pronoun use in the paragraph. These researchers acknowledge that on some occasions, AI might detect that the previous sentences or context represent a plural and offer "them" instead of "her". In contemporary English, depending on personal preferences, the use of gender-neutral and gender-inclusive pronouns is increasing, but in this case, the suggestion from the AI remained incorrect.

Pronoun Usage Recommendation 2

It appears you have used the object pronoun *him* in a subjective position. Consider changing it.

Text before editing:
One impressive thing I received from <u>him</u> is that day.

Text after editing:
One impressive thing I received from he is that day.

In the opinion of these researchers, while the pronoun *him* does form part of the complete subject *One impressive thing I received from him,* it is actually functioning as the object pronoun of the preposition *from* in the adjective clause *I received from him*. Free Grammarly's suggestion didn't work in this case.

Noun Usage Recommendation

It seems that *classes* may not agree in number with other words in this phrase.

Text before editing:
…, so we enjoy her class more than any other subject <u>classes</u>.

Text after editing:
…, so we enjoy her class more than any other subject class.

In the opinion of these researchers, rather than suggesting only the change to the countable noun *class*, in real-time editing, it would be more appropriate if Free Grammarly went on to suggest removing either the word *subject* or the word *class* in the clarity and conciseness feedback it offers.

Preposition Usage Recommendation

It seems that preposition use may be incorrect here.

Text before editing:
Even though I graduated <u>for</u> 3 years, I always…

Text after editing:
Even though I graduated 3 years, I always…

In the opinion of these researchers, the suggestion made by Free Grammarly to delete the preposition *for* is correct, but after applying the change, the dependent clause remained fragmented without the adverb *ago* to refer to the period of time that is completed and goes from a point in the past up to the present. Free Grammarly also did not prompt that the single numeral *3* should be spelled orthographically as *three* in this structure.

Verb Usage Recommendation 1

The plural verb *start* does not appear to agree with the singular of being a

Text before editing:
…but also the lessons of

Text after editing:
…but also the lessons

subject *a good person*. Consider starts from changing the verb form for subject-verb agreement.

being a good person that <u>start</u> from myself.

good person that myself.

In the opinion of these researchers, the noun phrase *a good person* is not the subject of this sentence. It is functioning as the object of the gerund *being* and forms part of the preposition phase *of being a good person* which is functioning as an adjective modifying the head noun *lessons*. The noun phrase *the lessons* is the subject of the sentence, and it requires the plural verb *start*. The student's original text was correct, but Free Grammarly identified it as wrong.

Verb Usage Recommendation 2

It appears that the verb *know* does not agree with the subject. Consider changing the verb form.

Text before editing:
After Ajarn Chan <u>know</u> the story, then hurry and bring us to the hospital.

Text after editing:
After Ajarn Chan knows the story, then hurry and bring us to the hospital.

In the opinion of these researchers, a major part of the problem here lies in the student's rather messy sentence, which would have been tricky for Free Grammarly to untangle. The only suggestion Free Grammarly made was to change the present tense verb *know* to *knows* for subject-verb agreement, but the context, particularly in the sentence immediately preceding this sentence, tends to indicate that the present tense verb *know*s should be changed to the past tense verb *knew*.

Misspelled Words Recommendation 1

The word *Mathematic* doesn't seem to fit this context. Consider replacing it with a different one.

Text before editing:
Mrs. Treechada, who teaches us Mathematic,...

Text after editing:
Mrs. Treechada, who teaches us Mathematics,...

In the opinion of these researchers, Free Grammarly correctly identified and corrected the spelling of the word mathematics but didn't pick up the capitalisation error in real-time

editing. When mathematics is used as a general reference to a school subject, rather than part of the title of a course with a course number, it remains a common noun.

Misspelled Words Recommendation 2

The word Enow doesn't seem to fit this context. Consider replacing trying to	Text before editing:	Text after editing:
	Mr <u>Enow</u> was always trying	Mr Snow was always
it with a different one.	to understand his students.	understand his students.

      In the opinion of these researchers, Free Grammarly did not recognise that *Enow* is the teacher's surname and follows the abbreviated title *Mr.* The suggested change does not work in this case.

Misspelled Words Recommendation 3

The spelling of (highlighted word) is a non-British variant. For	Text before editing:	Text after editing
	She is the <u>counselor's</u> teacher	She is the counsellor's teacher
consistency, consider replacing it with the British English spelling.	in my class, and she…	in my class, and she…

      In the opinion of these researchers, in line with its setting, Free Grammarly correctly identified and corrected the non-British English spelling of the word *counselor's* but didn't recognise that the possessive noun *counsellor's* should be changed to the adjective *counselling* to make the complete noun clause *she is the counselling teacher*. It is unlikely in this context that the counsellor is a student in the class or that the teacher and the counsellor are two separate people.

Comma Usage Recommendation 1

When speaking directly to people, their names must be set off by commas. Consider adding the comma(s).	Text before editing:	Text after editing:
	My first Korean Language	My first Korean Language
	teacher is Korean, but she can	teacher is Korean, but she can
	speak a bit <u>Thai</u>.	speak a bit, Thai.

In the opinion of these researchers, Free Grammarly considered the word *Thai* a person's name, but it is the name of a language in this context. The suggestion should have been to add the preposition *of* to form the clause *she can speak a bit of Thai*. Free Grammarly also missed the incorrect capitalisation of the common noun *language* here.

Misspelled Words Recommendation 2

It appears that you are missing a comma after the introductory confidence	Text before editing:	Text after editing:
	<u>Last</u> of all, it is confidence	Last, of all, it is
phrase *Last.* Consider adding a front of the comma.	when you present in front of the classroom…	when you present in the classroom…

In the opinion of these researchers, Free Grammarly did not recognise that *Last of all* is already an introductory adverb phrase followed by a comma. When the suggestion was applied, the structure was incorrect. It would be better to change the introductory phrase to *Lastly.*

Misspelled Words Recommendation 3

It appears that you have an unnecessary comma before the day if	Text before editing:	Text after editing:
	When it is a presentation <u>day,</u>	When it is a presentation
dependent clause marker *if.* and	if you are the first to present	you are the first to present
Consider removing the comma. with the	and show your confidence	show your confidence
(Cont.)	with the right information, you will get better points.	the right information, you will get better points.

In the opinion of these researchers, when the conditional subordinator *if* is preceded by an independent clause, the comma can be removed. However, in this case, *if* is preceded by a dependent clause with the word *when* functioning as a time subordinator, so the comma is needed. The structure of this compound-complex sentence is tricky, but the student's original text is correct.

Conclusion

Artificial intelligence has been a hot topic for the past decade and has become a popular tool in several fields, particularly in education and academia. Like any tool used in any profession, its usefulness and practicality must be evaluated as objectively as possible. One such tool is an AI software tool for grammar correction known as Grammarly. This study has aimed to shed light on the rates of accuracy in error correction using the free version of Grammarly to examine Thai EFL writer's written work. Although Free Grammarly does show some weakness in certain areas, it does perform at a very respectable level in most areas. The results are significant as they have shown that it is an effective and reliable tool that has a high rate of accuracy in identifying and explaining the errors that occur in Thai students' EFL writing. Free Grammarly can be used with confidence not only by students and educators but also by anyone who wishes to improve their writing skills with nothing more than a little motivation and an internet connection.

Limitations of the Study

Free Grammarly remains intentionally weak in some key areas in which Thai EFL students make a lot of errors. The program's weaknesses include the recognition of missing or unnecessary capitalisation, the misuse of commas in compound and complex sentences (Khumphee & Yodkamlue, 2017), and the detection of fragments in writing. To be fair to the developers, Grammarly needs to make money to be sustainable for all stakeholders, so the opportunity to access further editing suggestions in these and other areas can be gained only through the purchase of Grammarly Premium. In addition, students' awareness of Free Grammarly's shortcomings and the timely intervention of a knowledgeable course instructor will go a long way towards helping the students with their issues in these areas.

Another consideration that instructors must make is the choice between British and American English for both the Free Grammarly writing assistant and the students. When giving the instructions to write the paragraph to the students, the course instructor did not specify that any particular dialect be used. However, when uploading the paragraphs to Free Grammarly, a choice must be made. This can make a slight difference to Grammarly's spelling

suggestions but does not detract from the accuracy of the feedback given. All of Free Grammarly's dialect suggestions were nonetheless correct.

When giving the writing instructions, some instructors may prefer to specify an exact word count, rather than a page percentage. For example, seventy-five per cent of one double-lined page in a standard font would equate to approximately 300 words. There is also the option to specify a certain number of sentences when collecting writing samples.

Further Recommendations

Considering that Free Grammarly identified and accurately corrected all but the above 15 examples out of a total of 226 errors, the result is remarkable. During conducting this research, it did a commendable job in assisting in the correction of errors made by these Thai EFL students in a university setting. Thi and Nikolov (2022) suggest that if managed correctly, instructors could easily use the program in the classroom along with their professional and timely advice. Free Grammarly's technical explanations regarding the editing suggestions it makes are detailed and thorough. It makes very few errors. Thai students as well as instructors who find it challenging to explain and understand in-depth grammar concepts can all learn a great deal while using the Free Grammarly program.

For future researchers, there is a clear opportunity to carry out an experiment to determine whether or not a significant advantage using Grammarly Premium in a Thai EFL context exists. The program gives advanced feedback including full sentence re-writes, vocabulary ideas, tone suggestions, clarity, and more, but with all that said, Free Grammarly has still proven that it can be an invaluable, knowledgeable, and mostly accurate writing assistant for Thai EFL students.

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Appendix A

Table A1

Error Types and Free Grammarly Feedback Prompts

Error Type	Description	Examples of Grammarly Feedback Prompts
Grammar usage	Identification of an incorrect or missing determiner	It seems that there is an article problem here.
pronoun	Identification of incorrect pronoun use	It seems that there is a use problem here.
may be	Identification of incorrect conjunction use	It seems that conjunction use incorrect here.
	Identification of an incorrect noun form	It seems that this noun form may be incorrect.
be	Identification of an incorrect or missing preposition	It seems that preposition use may be incorrect here.
pronoun *she try* are not in agreement. Consider changing the verb.	Identification of incorrect subject-verb agreement	It appears that the subject and the verb
it to	Identification of an incorrect verb form	It appears that the verb believed is incorrectly used with the helping verb does. Consider changing the base form.
be	Identification of an unnecessary verb	The verb *being* appears to unnecessary here.
	Identification of a missing verb	The past participle verb *seen*

Error Type	Description	Examples of Grammarly Feedback Prompts
	has been auxiliary verb. adding one or using the past simple instead.	used without an Consider
Spelling	Identification of incorrect or missing capitalisation	The pronoun *I* should always be capitalised.
	Identification of incorrect hyphenation hyphenated to fit this Consider replacing it with a different one.	The word (highlighted words) doesn't seem context.

Error Type (Cont.)	Description (Cont.)	Examples of Grammarly Feedback Prompts (Cont.)
	Identification of missing words) is hyphenation	It seems that (highlighted words) is missing a hyphen. Consider adding the hyphen(s).
	Identification of commonly confused words context. replacing it with a different	The word (highlighted words) doesn't seem to fit this Consider one.
	Identification of incorrectly this compounded words	*Everytime* is not a word. Replace with the two separate words – *every time*.
	Identification of mixed-dialect word) is a variant. For consistency, consider replacing it with the British English spelling. spelling	The spelling of (highlighted non-British

Punctuation improperly punctuation. Consider adding/deleting a space.	Identification of incorrect spacing before and after punctuation	It appears that you have spaced some
missing a comma on.	Identification of comma misuse	It appears that you are after the introductory phrase Later Consider adding a comma.
seems to be	Identification of period misuse	The abbreviated title *Mrs.* punctuated incorrectly. Consider changing the punctuation.
Conciseness	Identification of wordiness or redundancy	It appears that (highlighted word or phrase) may be unnecessary in this sentence. Consider removing it.
Other space *there* and *were.* removing the extra space.	Identification of additional space between words.	It appears that you have an extra between the words Consider

Note 1: The right-hand column of Table A1 contains one example of each type of writing assistance prompt given by free Grammarly. In total, free Grammarly presented its 226 prompts in 42 different ways. Only one example of each type of feedback is demonstrated. Additional examples are provided in Tables 2 and 3.

Note 2: The basic results of the Thai EFL students' writing errors were arranged under three headings by the researchers. The information appears as (1) Error Type: The type of error as noted by the researchers, such as grammar, spelling, punctuation, conciseness, etc., (2) Description: A brief description of the writing issue as noted by the researchers, and (3) Feedback: Free Grammarly's real-time editing suggestion.