

The Effects of Grammarly Application on English Writing Skills:

Thai Undergraduate Basic English Students

ผลของการใช้แอปพลิเคชัน Grammarly ต่อทักษะการเขียนภาษาอังกฤษของนักศึกษา
ระดับปริญญาตรีชาวไทยในรายวิชาภาษาอังกฤษพื้นฐาน*Sinakarn Sangsakrit* and Piyanut Udomkiatsakul***

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Abstract

This study explores the effects of Grammarly application on English writing skills among Thai undergraduate students. A quantitative method was applied using surveys and pre-/post-writing tests. The samples included 100 first-year students at North Bangkok University, Rangsit Campus. Students' essays on two topics were evaluated for grammar, vocabulary, and structure. Post-test scores showed significant improvement, with gains of 11.13 and 12.32 points ($p < 0.0001$). Students expressed high satisfaction with Grammarly's ease of use and accuracy. They also reported increased writing confidence and autonomy. The findings support Grammarly's effectiveness and call for further long-term studies.

Keywords: Effects, Grammarly application, Satisfaction**บทคัดย่อ**

การศึกษานี้มุ่งสำรวจผลของการใช้แอปพลิเคชัน Grammarly ที่มีต่อทักษะการเขียนภาษาอังกฤษของนักศึกษาระดับปริญญาตรีชาวไทย โดยใช้วิธีการวิจัยเชิงปริมาณผ่านแบบสอบถามและแบบทดสอบการเขียนก่อนและหลังการใช้แอปพลิเคชัน กลุ่มตัวอย่างประกอบด้วยนักศึกษารุ่นปี 1 จำนวน 100 คน จากมหาวิทยาลัยนอร์ทกรุงเทพ วิทยาเขตรังสิต บทความในสองหัวข้อได้รับการประเมินในด้านไวยากรณ์ คำศัพท์ และโครงสร้างประโยค ผลการทดสอบหลังการใช้แอปพลิเคชัน แสดงให้เห็นถึงการพัฒนาที่ชัดเจน โดยมีคะแนนเพิ่มขึ้นเฉลี่ย 11.13 และ 12.32 คะแนน ($p < 0.0001$) นักศึกษาแสดงความพึงพอใจในระดับสูงต่อความง่ายในการใช้งานและความแม่นยำ

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ของ Grammarly รวมถึงรายงานว่ามีความมั่นใจและความเป็นอิสระในการเขียนเพิ่มมากขึ้น ผลการวิจัยสนับสนุนประสิทธิภาพของ Grammarly และเสนอแนะให้มีการศึกษาต่อเนื่องในระยะยาว

คำสำคัญ: ผลกระทบ แอปพลิเคชัน Grammarly ความพึงพอใจ

Introduction

In an era where English proficiency is essential for education, career advancement, and international communication, the ability to write accurately in English is a crucial skill for Thai undergraduate students to develop (Crystal, 2003; Grabe & Kaplan, 1996). However, many students continue to face challenges in grammar, vocabulary usage, and organizing their thoughts coherently in writing. According to grammar, Thai learners of English face persistent grammatical difficulties due to structural contrasts between the two languages. The absence of tense inflections, plural markers, and fixed word order in Thai contributes to frequent errors in subject–verb agreement, tense use, and article application. Reliance on translation-based strategies and limited exposure to authentic English texts further exacerbate these challenges, underscoring the need for targeted grammar-focused instruction to enhance academic writing accuracy.

The growing integration of digital tools in education has made Grammarly a widely adopted resource for language learning. As an AI-driven writing assistant, it provides real-time feedback on grammar, spelling, style, tone, and clarity, while also offering plagiarism detection and vocabulary suggestions. These features, combined with its accessibility across platforms, distinguish Grammarly from basic grammar checkers and position it as an effective support for academic writing (Grammarly, 2023). Nevertheless, its specific effects on Thai university students, particularly those in Basic English courses, remains underexplored. This raises important questions about whether Grammarly genuinely enhances learners' writing proficiency and, if so, in which aspects of grammar and academic writing improvements are most evident.

This study investigates the effects of Grammarly on grammatical accuracy, writing confidence, learner autonomy, and user satisfaction among Thai university students. While Grammarly is widely recognized as a writing aid, existing research has primarily focused on error detection and overall text quality. Little is known about its influence on learners' grammatical accuracy, confidence, and autonomy, particularly in the Thai higher education context, or about students' satisfaction with the tool. Addressing these gaps is crucial to assess Grammarly's potential not only as a corrective aid but also as a means of fostering independent language learning.

Objectives of the study

1. To assess the effect of the Grammarly application on the grammatical accuracy of English writing among Thai undergraduate students enrolled in a foundational English course.
2. To examine the influence of Grammarly on students' confidence and autonomy in English composition.
3. To evaluate students' satisfaction with the use of Grammarly as a supportive tool in academic English writing.

Literature Review**1. English Writing Skills****1.1 The Importance of Writing:**

English writing is crucial in academic settings for understanding subject matter, analyzing information, and presenting research effectively. Studies (e.g., Graham & Perin, 2007) have found a strong correlation between writing proficiency and academic success. Schmidgall & Powers (2020) highlighted that nearly 80% of professionals in English-speaking industries consider writing skills essential in the workplace. Writing proficiency plays a vital role in education, career, and communication.

1.2 Elements of Writing:

Shaughnessy (1977) emphasized the importance of syntax, grammar, vocabulary, and organization in developing writing skills. These elements are foundational for writing proficiency.

1.3 Challenges and Obstacles in English Writing:

Non-native speakers often face challenges with grammar, sentence structure, and vocabulary (Taye & Mengesha, 2024). Cultural differences also affect writing styles, and lack of confidence in writing is a common issue (Sarbunan, 2024). These obstacles hinder their writing effectiveness, especially in professional and academic settings.

2. Grammarly Application**2.1 What is Grammarly?**

Grammarly is an AI-driven writing assistant that provides real-time feedback on grammar, punctuation, style, and tone, aimed at improving writing quality across various platforms.

2.2 Functions of Grammarly:

Grammarly checks grammar and spelling, offers style suggestions, detects plagiarism, and enhances vocabulary and tone. These features are designed to assist users in improving their writing.

2.3 How Grammarly Works:

Grammarly provides instant feedback and integrates with several platforms to offer personalized assistance. It adapts to user preferences to improve writing clarity and coherence.

3. Thai Students and English Study

3.1 The Context of English Language Learning in Thailand

Thai EFL learners face persistent challenges in academic writing due to structural differences between Thai and English, such as the absence of verb inflections, plural markers, and fixed word order, which often lead to errors in tense usage, subject-verb agreement, and sentence organization (Noom-Ura, 2013; Watcharapunyawong & Usaha, 2013). These difficulties highlight the need for additional support in developing writing proficiency. In recent years, technological tools have become increasingly valuable in this regard, providing learners with immediate feedback and opportunities for independent improvement (Hyland & Hyland, 2019). Among these, Grammarly has gained wide adoption as an AI-driven writing assistant that offers real-time suggestions on grammar, style, tone, and clarity, as well as plagiarism detection and vocabulary enhancement. Its accessibility across platforms distinguishes it from basic grammar checkers and positions it as a widely used aid for academic writing (Grammarly, 2023). However, research on its effectiveness in the Thai higher education context remains limited, particularly concerning grammatical accuracy, writing confidence, learner autonomy, and student satisfaction.

4. Research Related to Thai University Students

Khamkhien, A. (2022), explored the English writing abilities, challenges, essential skills, and learning preferences of Thai undergraduate business students. The findings revealed that the students faced difficulties with grammar and vocabulary. They expressed a strong need to improve their skills in writing business-related documents, such as emails, product descriptions, and progress reports. Additionally, the students were interested in learning business vocabulary and expressions, receiving clear teacher guidance, and studying in a supportive learning environment. Techawongstien, S., & Kwangsawad, T. (2021), examined both teachers' and students' perspectives on the importance of English writing, the challenges they face, and their expectations for teaching and learning writing. Both teachers and students

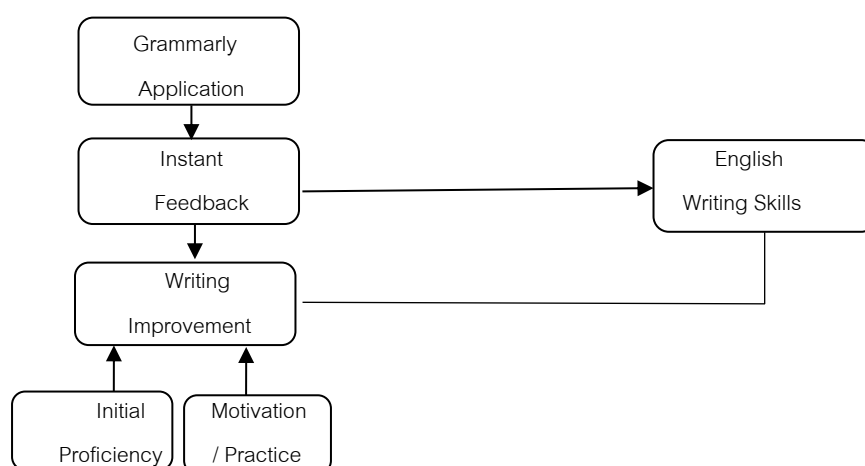
recognized the importance of English writing skills and advocated for its integration into all levels of education. However, challenges such as time constraints, limited resources, and the diverse abilities of students were identified as significant obstacles. Sirisatit, T. (2002), focused on the specific needs of Thai students in learning how to write English paragraphs. Most students expressed a desire to improve their ability to write descriptive and narrative paragraphs, understand the characteristics of well-structured paragraphs, and engage in the writing process. Additionally, they preferred pass/fail grading systems, smaller class sizes of around 30 students, and vocabulary-building activities.

The above studies collectively highlight the current needs and expectations of Thai students in enhancing their English writing skills. The findings suggest that curriculum design and teaching strategies should be tailored to address these needs, providing supportive environments and clear teacher feedback and focusing on essential writing skills like grammar, vocabulary, and business writing.

5. Relevant Theories

- Input Hypothesis (Krashen, 1989): Learning is enhanced by input just above the learner's current level.
- Output Hypothesis (Swain, 2005): Producing language helps deepen understanding.
- Interaction Hypothesis (Long, 1983): Communication and feedback enhance language learning. And Grammarly supports these theories by offering input (feedback), and facilitating reflective learning, thus helping learners improve their English skills

(Conceptual Framework)



Methodology

1. Research Design:

This is a quantitative research study using both survey and experimental methods to assess the impact of using the Grammarly application on the development of writing skills among undergraduate students. Data will be collected before and after using the tool to compare writing skill improvement.

2. Population and Sample:

2.1 Population: 720 Thai undergraduate students enrolled in the Basic English course, in semester 1/2024 at North Bangkok University, Rangsit Campus.

2.2 Sample: 100 students from the Basic English course in semester 1/2024, selected through random sampling. A sample of 100 students was drawn from the population of students enrolled in the Basic English course in the first semester of 2024 using simple random sampling. Each student was assigned a unique number, and 100 numbers were randomly selected using a random number generator. This method ensured that every student had an equal probability of selection ($P=0.2$), minimizing selection bias and producing a sample representative of the population.

3. Data Collection Tools:

3.1 Pre- and Post-Writing Tests: To assess students' writing skills before and after using Grammarly, two writing tests were administered. The pre-writing test required students to write on two topics related to their daily life and academic experiences, with each task approximately 150–200 words and a time limit of 30 minutes, conducted in class under controlled conditions. After being introduced to Grammarly, students completed the post-writing test on two new but similar topics, with the same word length, time limit, and controlled conditions. Both tests were evaluated using a scoring rubric focusing on grammatical accuracy, coherence, vocabulary usage, and overall task completion, enabling a direct comparison of writing performance before and after the intervention.

3.2 Survey Questionnaire: To gather data on students' experiences and satisfaction with Grammarly.

4. Research Procedure:

4.1 Sample Selection: 100 students will be randomly selected from the Basic English course.

4.2 Pre-Writing Test: Students will complete a writing test on two topics.

4.3 Introduction to Grammarly: Students will be introduced to Grammarly's features.

4.4 Post-Grammarly Writing: Students will rewrite the same topics after using Grammarly.

4.5 Post-Test: Students will complete a second writing test to measure improvement.

4.6 Survey Distribution: A questionnaire will be distributed to gather feedback on their experience using Grammarly.

5. Data Analysis:

Data from pre- and post-tests will be analyzed using statistical tools such as Excel to calculate means, standard deviations, and t-tests. Additionally, survey responses will be analyzed to assess student satisfaction and experiences.

Data Collection in the Research

The data collection in this research is divided into two main parts: a writing test and a satisfaction assessment regarding the use of the Grammarly application. The details are as follows:

1. Pre-test and Post-test Writing Assessment Using the Grammarly Application

A total of 100 students, randomly selected from those enrolled in the Basic English course in the first semester of the academic year 2024 (1/2567), participated in the following activities:

1.1 Pre-Test (Before using the application)

Students were requested to write two essays, each with a minimum of 150 words, based on the following topics:

- Topic 1: *Write about the most impressive place you have ever been.*
- Topic 2: *Write about a memorable event in your life.*

The essays were evaluated using criteria focused on grammar, vocabulary accuracy, and sentence structure in order to record their writing performance before using Grammarly.

1.2 Post-Test (After using the application)

After the samples used Grammarly to write and revise their own work, they were requested to write essays on the same topics again. The post-test essays were assessed using the same criteria as the pre-test in order to compare and measure writing improvement.

2. Satisfaction Assessment Regarding the Use of Grammarly

After completing the writing test, students completed a satisfaction questionnaire concerning their experience using Grammarly.

Questionnaire Characteristics:

The questionnaire is a 5-point rating scale consisting of 5 items:

1 = Very Dissatisfied

2 = Unsatisfied

3 = Neutral

4 = Satisfied

5 = Very Satisfied

Suitability of the Five-Point Likert Scale: A five-point Likert scale (1 = Very Dissatisfied to 5 = Very Satisfied) was used to measure students' perceptions of Grammarly. It is suitable because it provides clear gradation of responses, is easy for participants to understand, and allows reliable quantitative analysis of attitudes and satisfaction.

Questionnaire Quality Assessment:

- The Index of Item-Objective Congruence (IOC), evaluated by three experts, yielded an IOC value of 0.93, indicating strong alignment with the research objectives.

- The reliability of the questionnaire, measured by Cronbach's Alpha, was 0.82, which is considered reliable and acceptable for use.

Summary of Data Collection

The comparison of writing performance before and after using Grammarly demonstrates students' writing skill improvement. Additionally, the quality-assured satisfaction questionnaire effectively evaluates students' experiences with the Grammarly application.

Results

The research findings are presented in two main parts: (1) writing test results before and after using the Grammarly application, and (2) data on user satisfaction collected through a rating-scale questionnaire. Each part is discussed in detail as follows:

1. Writing Test Results Before and After Using Grammarly

Table I: Writing Test Scores – Pre-test and Post-test)

Student Number	Pre-test Scores (Passage I)	Post-test Scores (Passage I)	Student Number	Pre-test Scores (Passage II)	Post-test Scores (Passage II)
1	60	75	1	63	79
2	55	70	2	58	74
3	62	78	3	65	82
4	58	77	4	61	81
5	64	80	5	67	84
6	47	62	6	50	66
7	58	76	7	61	80
8	64	71	8	67	75
9	59	78	9	62	82
10	60	72	10	63	76
11	65	70	11	68	74
12	61	76	12	64	80
13	52	63	13	55	67
14	50	62	14	53	66
15	53	67	15	53	71
16	58	67	16	61	76
17	64	72	17	67	76
18	67	77	18	69	81
19	69	78	19	72	82
20	57	70	20	60	74
21	59	76	21	62	80
22	58	67	22	61	71
23	52	66	23	55	70
24	61	78	24	64	82
25	67	73	25	70	77
26	70	82	26	73	87
27	55	64	27	58	69

Student Number	Pre-test Scores (Passage I)	Post-test Scores (Passage I)	Student Number	Pre-test Scores (Passage II)	Post-test Scores (Passage II)
28	54	67	28	57	72
29	51	59	29	54	64
30	55	71	30	58	76
31	57	69	31	61	74
32	59	68	32	63	73
33	62	70	33	66	75
34	64	75	34	68	80
35	66	79	35	70	84
36	54	63	36	58	67
37	53	61	37	57	66
38	57	68	38	61	73
39	59	67	39	63	72
40	56	58	40	60	73
41	52	59	41	56	64
42	58	67	42	62	72
43	61	74	43	65	79
44	64	67	44	68	72
45	69	78	45	73	83
46	67	86	46	71	84
47	63	73	47	67	78
48	66	76	48	70	81
49	54	62	49	58	67
50	54	69	50	58	74
51	56	67	51	60	72
52	59	78	52	63	83
53	58	69	53	62	74
54	51	67	54	55	72
55	52	64	55	56	69
56	58	76	56	62	81
57	59	68	57	63	73

Student Number	Pre-test Scores (Passage I)	Post-test Scores (Passage I)	Student Number	Pre-test Scores (Passage II)	Post-test Scores (Passage II)
58	61	73	58	65	78
59	66	72	59	70	77
60	68	79	60	72	84
61	63	81	61	67	86
62	64	79	62	68	84
63	62	71	63	66	76
64	60	69	64	64	74
65	65	74	65	69	79
66	67	76	66	71	81
67	56	65	67	60	70
68	54	67	68	62	72
69	54	61	69	58	66
70	52	64	70	56	69
71	51	61	71	55	66
72	50	62	72	54	67
73	58	70	73	62	75
74	54	63	74	58	68
75	55	67	75	59	72
76	54	66	76	58	71
77	52	68	77	56	73
78	51	59	78	55	64
79	59	67	79	63	72
80	58	69	80	62	74
81	54	63	81	58	68
82	55	60	82	59	65
83	53	64	83	57	69
84	57	67	84	61	72
85	68	78	85	72	89
86	67	81	86	71	86

Student Number	Pre-test Scores (Passage I)	Post-test Scores (Passage I)	Student Number	Pre-test Scores (Passage II)	Post-test Scores (Passage II)
87	62	70	87	66	75
88	65	76	88	69	81
89	66	72	89	70	77
90	61	72	90	65	79
91	60	68	91	64	73
92	65	74	92	69	79
93	64	77	93	68	82
94	68	74	94	72	79
95	66	72	95	70	77
96	61	70	96	66	75
97	64	71	97	68	76
98	62	75	98	66	80
99	67	78	99	71	83
100	65	83	100	69	88

Statistical Analysis Results (Passage I)

Mean Pre-test Score: 59.37

Mean Post-test Score: 70.50

Average Improvement: 11.13 points

t-value (t-statistic): 29.78

p-value: $< 0.0001 (3.33 \times 10^{-51})$

Statistical Analysis Results (Passage II)

Mean Pre-test Score: 63.08

Mean Post-test Score: 75.40

Average Improvement: 12.32 points

t-value (t-statistic): 33.85

p-value: $< 0.0001 (3.18 \times 10^{-56})$

Interpretation of the Statistical Test:

Since the p-value of both passages are significantly lower than the standard level of significance (e.g., 0.05 or 0.01), the difference between the pre-test and post-test scores is statistically significant.

This indicates that the use of the Grammarly application significantly improves students' English writing skills.

Table II: Writing Test Results

Writing Task Topic	Pre-Test (Average Score)	Post-Test (Average Score)	Improvement (%)
Writing about an impressive place	59.37	70.50	11.13
Writing about a memorable event	63.08	75.40	12.32

Analysis of Writing Test Results:

The writing scores of students significantly increased after using the Grammarly application. This result reflects an improvement in writing skills facilitated by Grammarly's grammar-checking and error-correction technology.

Topic 1 (Impressive Place): The average score increased from 59.37 to 70.50, representing a 11.13% improvement. This indicates enhanced writing skills in grammar, vocabulary use, and content organization after revision through Grammarly.

Topic 2 (Memorable Event): The average score rose from 63.08 to 75.40 an increase of 12.32%, reflecting a general improvement in students' writing performance with the support of Grammarly.

The increasing average scores in both topics confirm the effectiveness of Grammarly in enhancing writing skills among the students in the Basic English course.

2. Satisfaction with the Use of Grammarly

Table III: Satisfaction with Grammarly

Evaluation Aspects	1	2	3	4	5	Average
Grammar correction accuracy	4	4	10	30	52	4.22
Spelling check accuracy	2	4	10	36	48	4.24
Sentence structure enhancement	3	5	15	37	40	4.06
Vocabulary suggestions	4	4	15	25	52	4.17
Ease of use	2	4	16	22	56	4.26
Editing speed	6	3	5	37	49	4.20
Clarity of explanations and suggestions	3	3	15	38	41	4.11
Overall average satisfaction						4.18

Note:

The evaluation aspects for students' satisfaction with Grammarly were adapted from previous studies on technology-assisted writing tools (e.g., Alharbi, 2021; Hussain, 2020) to reflect key features affecting writing improvement and user experience. The study followed a technology-enhanced language learning framework grounded in Sociocultural Theory (Vygotsky, 1978), viewing Grammarly as a scaffolding tool that supports autonomous learning, enhances grammatical and lexical competence, and promotes user satisfaction through immediate, context-sensitive feedback.

Analysis of Satisfaction with Grammarly Results:

The majority of the students expressed high satisfaction, particularly with the application's ease of use (4.26) and spelling check accuracy (4.24). The overall average satisfaction is 4.18. It means that Grammarly Application not only improved their writing confidence but also contributed to better academic performance in English.

****Student Suggestions:****

- Add advanced features such as synonym suggestions and formal sentence structure checking.
- Integrate Grammarly into classroom activities to modernize and enhance English writing instruction.

Research Summary

The findings of this study indicate that the use of the Grammarly application has a positive impact on grammatical accuracy in English writing among Thai undergraduate students enrolled in the basic English course. Additionally, the application enhances students' confidence and independence in writing.

The satisfaction survey results revealed that most participants expressed a high level of satisfaction with Grammarly, particularly in terms of its ease of use, accuracy in grammar correction, and the usefulness of its suggestions. These findings confirm that Grammarly is an effective tool for improving English writing skills in the academic context.

Discussion

Unlike previous studies that focused mainly on grammar and spelling (Alharbi, 2021), this study examined grammatical accuracy, writing confidence, learner autonomy, and overall satisfaction with Grammarly, using both pre- and post-writing tests and qualitative feedback. The findings reflect Sociocultural Theory (Vygotsky, 1978), as Grammarly served as a scaffolding tool that guides students to recognize errors, improve sentence structure and vocabulary, and develop greater autonomy in writing.

According to Zinkevich and Ledeneva (2021), who demonstrated that Grammarly significantly enhances students' academic writing skills by improving grammatical accuracy and vocabulary usage. Their research indicated that postgraduate students utilizing Grammarly exhibited better sentence structuring and word choice in their essays. This supports the current study's observation that continuous use of Grammarly not only boosts writing accuracy but also enhances students' confidence in their writing abilities.

Overall, it shows that the use of Grammarly contributes positively to both the accuracy and confidence of student writers. These results suggest that writing assistance tools like Grammarly can play an essential role in improving students' academic performance and writing outcomes.

Summary of Discussion

The overall findings indicate that the Grammarly application is highly effective in improving the English writing skills of the students enrolled in the basic English course. Writing scores significantly increased after using the app, and the students expressed high satisfaction with its user-friendliness, accuracy, and useful suggestions.

Nevertheless, this study presents certain limitations, such as uncontrolled variables like students' initial English proficiency and the short duration of application usage. Future research should consider exploring the long-term impact of Grammarly on advanced writing skills and academic writing performance.

Recommendations

Recommendations from This Study

1. Instructors should encourage students to use Grammarly regularly as part of their writing practice to enhance consistent development of writing skills.
2. Teachers should guide students in using Grammarly appropriately, combining it with detailed grammatical instruction.

3. A writing evaluation system should be implemented both before and after using Grammarly to clearly assess progress.

Recommendations for Future Research

1. Future research should explore the effects of Grammarly on students with varying English proficiency levels (beginner, intermediate, advanced)
2. A comparative study between Grammarly and other writing tools (e.g., Ginger, ProWritingAid) could be conducted.
3. Longitudinal studies could examine the long-term impact of using Grammarly on students' writing development.
4. Qualitative methods such as interviews or open-ended surveys should be used to understand students' perceptions and attitudes toward Grammarly.

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