Utilizing Grammarly Tool and Conventional Approach in Improving the Writing Skills of Junior High School Learners

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Abstract

Aim: This study aimed to examine the effectiveness of Grammarly-assisted instruction compared to conventional teaching in improving the writing proficiency of Filipino junior high school students. Specifically, it sought to assess students' performance in grammar, vocabulary, organization, and mechanics, and to determine whether a significant difference exists between the two teaching approaches.

Methodology: A quasi-experimental research design was utilized, involving two groups of junior high school students—one using Grammarly-assisted instruction and the other receiving conventional teaching. The intervention lasted for six weeks. Both groups took a pretest and post-test writing assessment. Statistical tools, including ANCOVA, were used to analyze the gains in writing proficiency and to identify any significant differences between the two groups.

Results: Both groups showed significant improvement in writing skills. However, students in the Grammarly-assisted group demonstrated greater gains, particularly in grammar and mechanics. ANCOVA results confirmed a statistically significant difference favoring the Grammarly group, with a large effect size.

Conclusion: Grammarly-assisted instruction is more effective than conventional teaching in enhancing specific writing skills, particularly grammar and mechanics. The immediacy and specificity of digital feedback played a key role in improving students' revision habits and awareness of writing conventions. These findings support the integration of automated tools with traditional methods to enhance writing instruction.

Keywords: AI competence, educational technology, academic performance, elementary science education

INTRODUCTION

Writing is recognized as a fundamental academic skill that allowed students to express their understanding, thoughts, and opinions effectively. As emphasized by Altameemy and Daradkeh (2019), writing served as a powerful medium for communication and academic success. In the classroom, this skill was essential across various subjects, prompting teachers to consistently emphasize its development. However, despite its importance, many students continued to struggle with writing proficiency, and teachers faced difficulties in providing effective instruction, especially in resource-constrained settings.

In the Philippine context, writing instruction remained a significant challenge. English teachers, particularly in public schools, were burdened with large class sizes and heavy workloads, limiting their ability to give timely and meaningful feedback on student writing. The shortage of time and instructional resources often led to delayed or superficial feedback, which affected the quality of instruction and hindered students' writing development. These systemic issues underscore the need for innovative solutions to support both teachers and learners.

With the rise of educational technology, tools like Grammarly provide potential support in addressing these challenges. Grammarly offered real-time suggestions on grammar, vocabulary, and sentence structure, allowing students to revise their work independently. Previous studies (Koltovskaia, 2020; Kocaman, 2022) showed promising results, particularly among older learners. Woodworth and Barkaoui (2020) found that these tools make checking easier and allow teachers to focus on higher-level writing issues. However, most of these studies focus on older students in college or senior high school. There was limited research focusing on junior high school students, whose needs and responses to such tools might differ. In addition, existing literature largely emphasized grammar correction, leaving a gap in understanding the tools' impact on other aspects of writing such as organization, coherence, and motivation. Eryılmaz (2021) argued that while grammar tools are useful, they do not automatically help with critical thinking or developing arguments in writing. Writing is not just about correct grammar—it is also about how ideas are organized and expressed. Balinbin (2020) reported also that Filipino students continue to lag behind their Southeast Asian neighbors in English proficiency. This shows that technology alone is not the answer. There must be a better understanding of how writing tools can be used to support meaningful learning. Simply giving access to technology is not enough—we must know if it works and for whom it works best. Therefore, more research is needed to study the overall effect of writing assistant tools alongside with conventional approach, especially on students in the lower years, such as junior high school learners.

This study was conducted to explore the effects of integrating Grammarly into traditional writing instruction among Grade 9 students. It examined whether the combined approach led to improvements in grammar, vocabulary, organization, and mechanics. The study also investigated changes in students' motivation and attitudes toward writing. The findings provided valuable insights into the practical application of writing assistant tools in junior high school contexts, especially in classrooms with limited instructional support.

The study supported United Nations Sustainable Development Goal (SDG) 4: Quality Education, which advocates for inclusive and equitable quality education and lifelong learning opportunities. By evaluating how technology-enhanced instruction affected writing performance and learner engagement, the research contributed to efforts aimed at making education more effective and responsive to diverse student needs—particularly in developing countries like the Philippines.

This study assumed that providing writing support would improve students' performance in key areas such as grammar, vocabulary, organization, and writing mechanics. It aimed to determine whether integrating a digital writing assistant like Grammarly into traditional writing instruction would lead to measurable improvements in students' writing. The study also expected to identify significant differences in writing outcomes between students who used Grammarly and those who received only conventional instruction. These assumptions were grounded in the theories of Constructivism (Vygotsky, 1978) and Behaviorism (Skinner, 1957), which together informed the design and implementation of the intervention.

Constructivist theory, developed by Lev Vygotsky, emphasized the importance of active engagement and social interaction in learning. It proposed that learners construct meaning through experiences, reflection, and feedback. In this study, Grammarly supported constructivist principles by providing students with immediate, personalized feedback on their writing. This allowed students to identify their own mistakes, make corrections, and learn through the process—fostering independence and self-regulation in writing.

At the same time, the study incorporated behaviorist principles that emphasized learning through repetition, practice, and reinforcement. According to B.F. Skinner (1957), behaviors that are rewarded or corrected are more likely to be repeated or modified. Traditional classroom strategies such as grammar drills, essay writing, and teacher

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feedback were used to reinforce writing skills. These practices aimed to strengthen writing habits and promote mastery of foundational writing components.

Grammarly functioned as a supplementary tool that provided real-time suggestions on grammar, vocabulary, punctuation, and mechanics. In large classes where individualized feedback was limited, the tool offered timely support that enabled students to revise their work independently. Studies such as those by Kocaman (2022) and Koltovskaia (2020) emphasized that tools like Grammarly fostered learner confidence and improved writing by supporting the editing process.

The study found that Grammarly helped reduce common surface-level errors and increased students' willingness to write. The availability of immediate feedback made students more confident and responsive to corrections, which supported their engagement in writing tasks. However, it was also observed that while Grammarly helped with grammar and mechanics, it had limitations in addressing deeper aspects such as idea development and text organization.

The conventional approach to teaching writing—emphasizing explicit instruction, teacher feedback, and paper-based practice—remains essential in many classrooms. Traditional methods allow for structured learning, deeper engagement with writing processes, and the development of foundational skills (Graham, 2019). Traditional instruction remained essential throughout the study. Writing activities included brainstorming, outlining, drafting, peer editing, and receiving teacher feedback. Studies show that these practices foster critical thinking and increase awareness of writing conventions (Wati, 2021). These tasks allowed students to build writing skills beyond surface corrections, especially in the areas of coherence, structure, and content development. Teachers played a crucial role in guiding students through reflective discussions and revisions, reinforcing the value of personal interaction in writing instruction.

Writing improvement was assessed based on four key components: grammar, vocabulary, organization, and mechanics. These indicators provided a clear structure for evaluating changes in writing performance before and after the intervention. While Grammarly primarily enhanced grammar and mechanics, vocabulary and organization improved more substantially through teacher-guided activities and consistent classroom practice.

In sum, the study demonstrated that combining digital and traditional approaches enhanced students' writing outcomes. Grammarly served as a useful tool for providing individualized and immediate feedback, especially in large classes. However, its effectiveness was maximized when paired with structured, teacher-led instruction that emphasized critical thinking, idea development, and writing fluency. This blended approach offered a practical strategy for improving junior high school students' writing performance.

Objectives

This study aimed to explore the effectiveness of utilizing Grammarly and conventional approaches in improving the writing skills of junior high school learners.

Specifically, this study sought to answer the following questions:
1. What is the participants' level of writing skills before and after the interventions in terms of:
    1.1 Grammar
    1.2 Vocabulary
    1.3 Organization; and
    1.4 Mechanics?
2. How do the participants' writing skills compare before and after the interventions?
3. Which of the two interventions is more effective in improving the participants' writing skills?

Hypothesis

Given the stated research problems, the following hypotheses were tested at 0.05 level of significance:
H_{o1}: The participants' writing skills do not significantly differ before and after the interventions.
H_{o2}: None of the interventions is effective in improving the participants' writing skills.

METHODS

Research Design

This study employed a quasi-experimental design with pre-test and post-test phases to compare the effectiveness of Grammarly-assisted instruction versus conventional writing instruction among Grade 9 students in a selected public school in Misamis Oriental.

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Population and Sampling

A total of 60 students from a public school in Misamis Oriental were randomly assigned into two equal groups—one using Grammarly and the other receiving traditional instruction. Participant selection followed specific inclusion and exclusion criteria to ensure reliability and validity, and sampling was done randomly using the Lottery method.

Instrument

The primary instrument was a teacher-made writing test that measured grammar, vocabulary, organization, and mechanics. Students wrote a 300–500 word essay based on a common prompt before and after the intervention. To ensure reliability, the test underwent pilot testing and content validation, yielding very high Krippendorff's Alpha scores across all four writing domains. Scoring was based on a detailed rubric adapted from established sources, categorizing student performance into five levels: Beginning, Emerging, Developing, Proficient, and Exemplary.

Data Collection

The data collection took place over eight weeks at a public school in Misamis Oriental with 60 Grade 9 students. In the first week, a pre-test was conducted to assess baseline writing skills. Students were then divided equally into two groups: one used Grammarly software, and the other received traditional writing instruction. Both groups participated in a six-week intervention during regular class hours, focusing on grammar, mechanics, vocabulary, and organization. In the final week, a post-test was administered to measure writing improvement. All sessions were conducted in a classroom setting, and the results from both tests were analyzed statistically.

Treatment of Data

The study used descriptive statistics to summarize writing skills before and after the intervention, paired sample t-tests to measure improvements within each group, and ANCOVA to compare post-test results between the Grammarly and conventional groups while controlling for initial differences.

Ethical Considerations

The researchers first sought approval from the LC Research Ethics Committee before conducting the study. Following ethics approval, the researchers secured permission from the school administration to conduct the study with Grade 9 students, and upon its approval, the researchers organized information sessions for both students and their parents. Ethical procedures followed the standards set by the Belmont Report. Privacy was strictly maintained through coded identities and secure storage of all data. Participants were assured of their right to withdraw at any point, and all collected data were handled confidentially throughout the study and designated for secure disposal after five years.

RESULTS and DISCUSSION

Problem 1. What is the participants' level of writing skills before and after the interventions in terms of:

1.1 Grammar;
1.2 Vocabulary;
1.3 Organization; and
1.4 Mechanics?

Table 1 presents a summary of the participants' writing skills in terms of mean scores, interpretations, and standard deviations across four core areas: grammar, vocabulary, organization, and mechanics. The results reflect the pretest and post-test scores of both the Grammarly group and the conventional group. The data offer a consolidated view of how participants' writing skills shifted over the course of the intervention period.

In the Grammarly group, the overall mean score increased from 1.74 (Emerging) in the pretest to 2.53 (Developing) in the post-test. This movement corresponds with observed upward shifts in three of the four areas.

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Specifically, grammar moved from 1.57 (Emerging) to 2.73 (Developing), and mechanics also improved from 1.83 (Emerging) to 2.87 (Developing). Vocabulary and organization, while both remaining within the *Emerging* level, showed numerical increases: vocabulary from 1.80 to 2.43, and organization from 1.77 to 2.10. These changes reflect the varying pace at which learners engage with different aspects of writing development.

Table 1
Summary Table of Participants' Writing Skills

| Score Range | Grammarly Group | | | | | | Conventional Group | | | | | |
| | Pretest | | | Post-test | | | Pretest | | | Post-test | | |
	M	Int	SD	M	Int	SD	M	Int	SD	M	Int	SD
Grammar	1.57	Em	0.73	2.73	Dev	0.69	1.73	Em	0.69	2.40	Em	0.77
Vocabulary	1.80	Em	0.81	2.43	Em	0.73	1.60	Em	0.67	2.07	Em	0.58
Organization	1.77	Em	0.90	2.10	Em	0.80	1.77	Em	0.73	2.10	Em	0.61
Mechanics	1.83	Em	0.83	2.87	Dev	0.78	1.83	Em	0.70	2.43	Em	0.63
Overall	**1.74**	**Em**	**0.82**	**2.53**	**Dev**	**0.75**	**1.73**	**Em**	**0.70**	**2.25**	**Em**	**0.65**

Legend:
4.51 – 5.00 = Ex (Exemplary); 3.51 – 4.50 = Prof (Proficient); 2.51 – 3.50 = Dev (Developing); 1.51-2.50 = Em (Emerging); 1.00-1.50 – Beg (Beginning)

Across these domains, learners appear to have made the greatest gains in grammar and mechanics. As Koltovskaia (2020) found in her study of student interaction with Grammarly, users frequently engage with corrections that target surface-level features like grammar and mechanics. These aspects tend to receive more immediate feedback, allowing learners to make repeated adjustments and internalize rules over time. Ranalli et al. (2021) also noted that students interacting with automated tools often show deeper engagement with language form and accuracy, especially when feedback is both clear and consistent.

In contrast, vocabulary and organization remained within the *Emerging* level for most learners in the Grammarly group, despite the increase in mean scores. This outcome aligns with the understanding that higher-order writing skills—such as organization and nuanced vocabulary use—often develop more gradually. O'Neill and Russell (2019) observed that while automated tools support revision, they may be more limited in guiding global concerns like idea flow or lexical depth, which often require guided instruction or explicit modeling.

The conventional group also showed progress, though the overall mean score rose from 1.73 to 2.25—both within the Emerging range. Grammar improved from 1.73 to 2.40, and mechanics from 1.83 to 2.43, reflecting similar trends to those observed in the Grammarly group. Vocabulary scores increased from 1.60 to 2.07, and organization from 1.77 to 2.10, again showing modest gains across the board. These changes align with findings by Li et al. (2021), who emphasized that writing development occurs through repeated exposure, guided revision, and practice in varied contexts.

Knoch et al. (2020) also highlight that the integration of writing instruction with consistent feedback—whether peer, teacher, or tool-assisted—can support writing improvement across both micro-level (mechanics, grammar) and macro-level (organization, vocabulary) features. In both intervention groups, learners showed movement toward improved writing performance, with higher post-test means and reduced standard deviations, indicating more consistent performance across participants.

Taken together, the results across Table 1 provide a snapshot of student progress in writing over time. Learners across both groups demonstrated growth, particularly in grammar and mechanics, while making incremental strides in vocabulary and organization. These trends mirror how writing development often unfolds—first through attention to accuracy, followed by gradual improvements in complexity, coherence, and lexical richness (Hyland, 2019). Whether through digital tools or traditional instruction, the structured engagement with writing tasks appeared to provide opportunities for learners to reflect, revise, and refine their writing skills.

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Problem 2. How do the participants' writing skills compare before and after the interventions?
Ho1. The participants' writing skills do not significantly differ before and after the interventions.

Table 2 shows the results of a paired-samples t-test analyzing pretest and post-test writing scores for both the Grammarly and conventional groups. For the Grammarly group, the mean writing score increased from 6.97 (SD = 2.95) in the pretest to 10.13 (SD = 2.40) in the post-test. The computed t-value was 16.30 with a p-value less than .001, indicating a statistically significant difference between the two time points. Similarly, the conventional group showed an increase in mean writing scores from 6.93 (SD = 2.35) to 9.00 (SD = 1.97), with a t-value of 11.70 and a p-value also below .001. In both cases, the p-values were well below the alpha level of .05, leading to the rejection of the null hypothesis (Ho1).

Table 2
Result of the Test of Difference in the Participants' Writing Skills Before and After the Interventions

Variable	Grammarly Group						Conventional Group					
	Pretest		Post-test		t(29)	p	Pretest		Post-test		t(29)	P
	M	SD	M	SD			M	SD	M	SD		
Writing skill	6.97	2.95	10.13	2.40	16.30*	<.001	6.93	2.35	9.00	1.97	11.70*	<.001

*Significant at .05 alpha level.

These results imply that there was a measurable and statistically significant change in the participants' writing skills after the interventions, regardless of whether they used Grammarly or received conventional instruction. While both groups began with nearly identical pretest scores, improvements in post-test scores were observed in both, inidcating that the participants' writing skills were positively influenced by their respective learning experiences.

The observed changes are consistent with research on writing development, which highlights the role of feedback and repeated practice in fostering improvement. Ranalli et al. (2021) notes that students exposed to revision opportunities—whether through automated feedback or teacher input—are better able to refine their writing skills over time. Koltovskaia (2020) also found that students who regularly engaged with automated feedback, such as that provided by Grammarly, tended to increase their awareness of errors and structural issues, leading to more thoughtful revisions.

In the case of the conventional group, structured writing instruction, including teacher feedback and guided revision tasks, likely played a central role in these outcomes. Li et al. (2021) emphasize that scaffolding and direct instruction support the gradual development of writing skills, particularly when learners are given consistent opportuneities to write, reflect, and revise.

Another point to consider is the decrease in variability across participants. Both groups showed lower standard deviations in the post-test compared to the pretest, implying more consistent performance among students after the interventions. For the Grammarly group, the standard deviation declined from 2.95 to 2.40, while for the conventional group, it dropped from 2.35 to 1.97. This reduction may reflect more uniform gains across learners, which is often a desirable outcome in educational settings where equity in skill development is emphasized.

In sum, based on the results of the paired-samples t-tests, there is sufficient evidence to reject *Ho1*. The writing skills of participants in both the Grammarly and conventional groups significantly differed before and after the interventions. These findings reinforce existing literature that supports the role of practice, revision, and feedback—whether human or automated—in helping learners improve their writing over time (Hyland, 2019; Knoch et al., 2020).

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Problem 3. Which of the two interventions is more effective in improving the participants' writing skills?
Ho2. None of the interventions is more effective in improving the participants' writing skills

To address Problem 3, an Analysis of Covariance (ANCOVA) was conducted to compare the post-test writing scores of participants in the Grammarly and conventional approach groups, while statistically controlling for their pre-test scores. This approach allowed for the isolation of the intervention's effect by adjusting for initial differences in writing proficiency.

As shown in Table 3, the Grammarly group had a higher post-test mean score (M = 10.13, SD = 2.40) compared to the conventional group (M = 9.00, SD = 1.97). The ANCOVA revealed a statistically significant difference between the two groups, $F(1, 57) = 14.70$, $p < .001$. Since the p-value is below the .05 significance level, the null hypothesis (Ho2) is rejected. This result suggests that, after accounting for pre-test performance, Grammarly was significantly more effective in improving writing skills than conventional instruction.

Table 3
ANCOVA Values Showing the Significant Differences in the Two Groups of Participants' Writing Skills.

Variable	Grammarly Group Post-test		Conventional Group Post-test		F(1,57)	p	η^2_p
	M	SD	M	SD			
Writing skill	10.13	2.40	9.00	1.97	14.70*	<.001	0.21

*Significant at .05 alpha level.

In addition to statistical significance, the effect size as measured by partial eta-squared ($\eta^2_p = 0.21$) is considered large based on Cohen's (1988) criteria. This indicates that 21% of the variance in post-test writing scores is attributable to the type of intervention received, highlighting a meaningful difference between the two instructional methods.

The findings suggest that the use of automated feedback tools like Grammarly can enhance writing development more effectively than traditional methods. Prior research supports this conclusion. For example, Koltovskaia (2020) reported that automated feedback encourages active revision, especially in grammar and sentence construction. Similarly, Ranalli et al. (2021) emphasized that such platforms enhance learner engagement by delivering immediate, targeted feedback, helping students recognize patterns and improve their drafts.

While both groups demonstrated improvement, the statistically significant and practically meaningful advantage of Grammarly suggests that the form and immediacy of feedback may play a critical role. Students in the Grammarly group received real-time, adaptive feedback, whereas those in the conventional group relied primarily on teacher comments and structured class activities. Both instructional approaches offer value, but they engage learners in different ways, as discussed in studies by Li et al. (2021) and Knoch et al. (2020).

Banking on these findings, one can infer that when teachers are equipped with the necessary skills and knowledge, AI can serve as a powerful tool in advancing both teaching effectiveness and student achievement.

Conclusions
This study provides valuable insights into how digital and traditional forms of writing support impact students' writing development in distinct yet complementary ways. Central to both approaches is the opportunity for students to actively engage with their writing, receive meaningful feedback, and reflect on ways to improve.

The findings revealed that Grammarly was significantly more effective than conventional instruction in improving students' writing skills. After controlling for pretest differences, the Grammarly group outperformed the conventional group on post-test scores, with a large effect size indicating that the type of intervention accounted for a substantial portion of the variance in writing outcomes.

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Grounded in Vygotsky's Constructivist Theory, the Grammarly intervention enabled students to receive immediate, personalized feedback—promoting self-regulated learning and iterative revision. In contrast, the conventional approach, informed by Skinner's Behaviorist Theory, reinforced structured learning through teacher feedback and repeated practice.

While both groups benefited from opportunities to revise and reflect, the digital support offered by Grammarly proved more effective in enhancing writing performance. This suggests that technology-based feedback tools can play a powerful role in fostering writing development, particularly when integrated thoughtfully into instruction.

Rather than positioning one method as universally superior, the findings underscore the value of leveraging the strengths of both digital and traditional approaches. By doing so, educators can design learning environments that are responsive, inclusive, and conducive to both skill-building and learner autonomy.

Ultimately, this study reinforces the importance of evidence-based, pedagogically sound writing instruction. As educational settings continue to evolve, combining human guidance with intelligent digital tools offers a promising pathway toward more effective and engaging writing instruction.

Recommendations

The study recommends that teachers may integrate tools like Grammarly into writing activities to offer immediate, individualized feedback and combine this with direct instruction to address both surface-level and higher-order writing skills. School administrators are encouraged to invest in access to educational writing platforms and provide professional development for teachers on integrating technology with traditional methods. Curriculum developers should incorporate blended writing instruction that addresses diverse learner needs and gradually builds from basic mechanics to more complex writing tasks. Future researchers are advised to explore the long-term effects of digital writing tools on student development and examine student engagement with various forms of feedback to improve instructional practices.

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