

AI utilization, teachers' feedback, writing anxiety, language exposure as links on Grade 9 students' writing skills

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Abstract

Aim: This study examined the association between Grade 9 students' artificial intelligence (AI) utilization, teacher feedback quality, writing anxiety, and English language exposure with their writing performance in a public high school in Jasaan District, Misamis Oriental, Philippines. The study focused on writing proficiency in terms of vocabulary, grammar, organization, coherence, and mechanics.

Methodology: A descriptive-correlational research design was employed involving 120 systematically selected Grade 9 struggling writers. Data were collected using validated questionnaires measuring AI utilization, teacher feedback quality, writing anxiety, and language exposure, alongside two writing tasks evaluated by three raters using a standardized rubric. Descriptive statistics summarized the levels of the variables, while canonical correlation analysis examined the associations between the independent variables and students' writing performance.

Results: Results indicated that AI utilization and language exposure were generally moderate, teacher feedback quality was rated high, and writing anxiety was moderate. Canonical correlation analysis revealed a statistically significant combined association between AI utilization, teacher feedback, writing anxiety, language exposure, and students' writing skills. AI utilization and teacher feedback showed the strongest associations with writing performance, whereas language exposure demonstrated the weakest contribution.

Conclusion: The findings suggest that responsible AI integration and high-quality teacher feedback play important roles in supporting students' writing development. Writing anxiety and language exposure also contribute to writing performance, highlighting the need for supportive instructional environments that strengthen students' confidence, language engagement, and revision practices. These results provide insights for improving writing instruction and instructional planning in secondary education.

Keywords: *writing skills, AI utilization, teacher feedback, writing anxiety, language exposure, Grade 9 students*

INTRODUCTION

Writing skills are essential for students to succeed in school. Many Grade 9 learners still struggle with vocabulary, grammar, organization, coherence, and mechanics. These challenges are evident in developing countries like the Philippines, where writing proficiency remains below national benchmarks (Cabigao, 2021). Internationally, Gupta et al. (2022) reported that even doctoral students continue to face persistent writing challenges, highlighting that writing proficiency remains a global issue across contexts. Results from the 2022 Philippine Informal Reading Inventory (Phil-IRI) and the School Year 2023–2024 National Achievement Test (NAT) show consistently low performance in written language tasks among junior high school learners.

Research identifies four major factors associated with writing performance: language exposure, teacher feedback, writing anxiety, and the use of artificial intelligence (AI) tools. AI platforms such as Grammarly and QuillBot provide immediate feedback on grammar and sentence structure (Flores & Barcelona, 2025; Dingal et al., 2024). However, overreliance on AI may limit essential skills like idea development and organization (Deep & Chen, 2025). Teacher feedback remains crucial, as clear and timely comments help address common writing errors among junior high school students, providing instructional input that strengthens their writing performance (Esperanza et al., 2024). Writing anxiety, often linked to fear of failure and time pressure, can negatively affect performance but may be reduced through supportive strategies that strengthen self-efficacy (Busse et al., 2023).

Language exposure strengthens vocabulary, coherence, and confidence. Structured instruction combined with authentic language use helps students internalize grammar and conventions, while Ramos (2023) highlights how writing errors and strategies in modular learning contexts reveal the importance of consistent exposure and guided practice in developing proficiency. However, in Misamis Oriental, many Grade 9 learners continue to produce fragmented sentences, repetitive vocabulary, and weak organization. Large class sizes and curriculum demands often limit teachers' ability to provide detailed feedback, while AI tools and existing strategies have not fully addressed writing anxiety and performance gaps.

Although previous studies have explored AI use, teacher feedback, language exposure, and writing anxiety separately, limited research has examined their combined associations with junior high school writing performance in Philippine public schools. Most studies focus on college or urban ESL learners. Internationally, writing proficiency continues to be a central concern in language education, with recent reviews showing that writing outcomes remain uneven across countries and highlight the need for integrated approaches to support learners (Özcelik & Batur, 2023). This study addresses the local gap by investigating how these four factors relate to Grade 9 writing performance in a national high school in Jasaan, Misamis Oriental. Aligned with Sustainable Development Goal 4 (SDG 4), it seeks to inform strategies that strengthen writing proficiency and support secondary learners. The findings are expected to guide teachers in designing more effective feedback practices, integrating AI tools responsibly, and creating supportive classroom environments that reduce writing anxiety. Likewise, curriculum planners may use the results to refine instructional approaches and allocate resources that enhance language exposure and writing development across junior high schools.

Review of Related Literature and Studies

This review of related literature presents both conceptual and research literature relevant to students' writing performance. It examines the association of AI utilization, teacher feedback, writing anxiety, and language exposure with the writing skills of Grade 9 students. It also discusses the components of writing—vocabulary, grammar, organization, coherence, and mechanics—and highlights how these are shaped by instructional practices, feedback quality, and language exposure, including the role of responsible AI use and supportive learning environments in improving student outcomes.

Writing Skills

Writing skills are essential for students to succeed in school, yet many Grade 9 learners continue to struggle with vocabulary, grammar, organization, coherence, and mechanics. The ability to produce clear and well-structured texts is crucial for academic achievement, but weaknesses in organization often hinder performance. Ramos (2023) points out that recurring writing errors and limited strategies make it difficult for learners to achieve clarity and coherence, underscoring the importance of targeted instruction. Research on junior high school learners in the Philippines highlights recurring weaknesses in vocabulary, grammar, organization, coherence, and mechanics, underscoring these as critical domains of writing proficiency (Esperanza et al., 2024). Vocabulary supports clarity and fluency, grammar ensures accuracy and coherence, organization structures ideas logically, coherence links them meaningfully, and mechanics maintain readability.

Feedback is another crucial element in writing development. Barrot (2021) explained that automated and teacher-provided corrective feedback helps learners steadily refine accuracy in their writing, while consistent and supportive responses encourage confidence and motivation among student writers. Teacher guidance remains indispensable even with the rise of digital tools, as feedback provides the human element of encouragement and direction that technology alone cannot replace.

The affective dimension must also be considered. Low self-confidence limits practice opportunities, while low self-efficacy reduces motivation (Busse et al., 2023). Emotional factors interact with technical instruction, meaning that writing development requires both skill building and psychological support.

Artificial Intelligence Integration

Artificial Intelligence (AI) is widely used in education, affecting teaching methods, student assessment, and learning experiences. Reviews of AI applications in K–12 highlight the role of adaptive feedback systems in supporting mastery of complex concepts (Chhabriya et al., 2024). At the same time, generative platforms raise both opportunities and concerns about ethics and overdependence (Deep & Chen, 2025).

In language education, AI tutors in language classrooms have been found to increase student attention and participation (Barrot, 2021). More advanced systems have strengthened vocabulary and grammar acquisition,

demonstrating how AI can complement traditional instruction (Flores & Barcelona, 2025). Personalized learning features further enhance motivation, as lessons are tailored to individual needs and progress levels.

Beyond academic outcomes, AI use also influences students' emotional well-being. Research indicates that AI tools can boost motivation and confidence but may also cause stress when learners rely too heavily on automated feedback (Busse et al., 2023). Writing assistants, while effective in improving grammar and organization, sometimes generate irrelevant ideas, which highlights the need for careful integration of AI into classroom practice (Dingal et al., 2024; Garcia & Lopez, 2025).

In the Philippine context, applications such as Grammarly have been integrated into secondary classrooms, with reported improvements in Grade 9 writing skills (Flores & Barcelona, 2025; Palmes & Barcelona, 2025). These tools are commonly used to assist students in checking grammar, refining sentence structure, and enhancing vocabulary during the drafting and revision stages. However, proper teacher guidance remains necessary to ensure responsible use and to prevent overdependence on automated feedback.

Teachers' Feedback

Teacher feedback plays a big role in improving students' writing, especially in English as a Second Language (ESL) and English as a Foreign Language (EFL) classrooms. Studies of junior high school learners in the Philippines show that addressing common writing errors through instructional input strengthens writing performance, underscoring the importance of consistent and targeted teacher feedback (Esperanza et al., 2024).

Different feedback types serve distinct purposes. Direct feedback often addresses grammar and mechanics, while indirect feedback encourages critical thinking and independent editing (Charalampous & Darra, 2023). Peer feedback also adds value by fostering collaboration and shared responsibility in the writing process.

Learner level also influences how feedback is received, as studies show that students respond differently to various types of teacher feedback depending on their proficiency. Structured and meaningful feedback not only improves writing performance but also supports positive attitudes toward writing (Yu & Yang, 2021).

Technology is reshaping feedback practices, and AI tools offer efficiency, though many teachers still struggle to integrate them effectively (Garcia & Lopez, 2025). Overall, teacher feedback remains a powerful tool in language learning—when clear, consistent, and responsive to student needs, it improves writing proficiency, fosters engagement, and supports long-term development.

Writing Anxiety

Writing anxiety is a common problem among students in different school levels and learning environments, especially in EFL and ESL contexts. Lack of writing practice, poor grammar understanding, limited vocabulary, and fear of negative feedback are major reasons for anxiety (Nagode & Pižorn, 2024; Naufina & Putro, 2025). Although anxiety can lower performance, it can also motivate some students to try harder, showing that its effects are not entirely negative.

Writing anxiety is not permanent—it can change over time. Students' anxiety decreases as their writing grades improve, especially with positive teacher support (Busse et al., 2023). Teacher feedback therefore becomes a critical factor in shaping students' emotional responses to writing tasks.

One important dimension of writing anxiety is writing self-efficacy deficit, which refers to students' lack of confidence in their ability to write well. Supportive teacher feedback and encouragement foster students' confidence in their writing abilities, strengthening self-efficacy, whereas overly critical or harsh evaluations can weaken it (Busse et al., 2023).

Another major form of writing anxiety is fear of negative evaluation, which arises from teacher comments, peer judgment, or self-imposed pressure (Chin & Chua, 2024). Constructive and kind feedback can reduce this fear and encourage participation.

Finally, time constraints are a significant source of writing anxiety in classrooms. Flexible pacing and time management support can reduce anxiety and improve writing outcomes (Busse et al., 2023).

Language Exposure

Language exposure plays a major role in learning and improving a second language. Students who are frequently exposed to English in different settings—both inside and outside school—tend to become more confident and skilled in using the language. Greater exposure outside the classroom has been linked to better accuracy in writing and overall proficiency, and Ramos (2023) further shows how consistent exposure and structured strategies in modular learning contexts help students overcome writing errors and strengthen overall proficiency.

Age of first exposure also influences language development. Learners introduced to English early often perform better in speaking and writing due to greater brain flexibility and adaptability (Aziz & Kashinathan, 2021). Daily use of English in informal settings—such as at home, through reading, or on digital platforms—strengthens fluency and comprehension. Combining formal classroom instruction with informal exposure produces the most effective results (Palmes & Barcelona, 2025).

Technology now plays a growing role in language exposure. AI tools and digital platforms provide personalized support and authentic input, helping learners improve vocabulary, grammar, and confidence in using English (Flores & Barcelona, 2025).

Grade 9 writing performance has been shown to be associated with language exposure, teacher feedback, writing anxiety, and the integration of AI tools. Previous studies have examined these variables separately, identifying their roles in shaping vocabulary, grammar, organization, coherence, and mechanics. Yet, limited research has analyzed how these factors collectively operate within the Philippine junior high school context. This study addresses that gap by investigating their combined associations, offering evidence-based insights to guide teachers and curriculum planners in strengthening writing proficiency and improving classroom practices.

Theoretical Framework

This study is anchored on four major theories that explain the associations among AI utilization, teacher feedback, writing anxiety, and language exposure with the writing skills of Grade 9 students. Vygotsky’s Sociocultural Theory (1978) emphasizes the Zone of Proximal Development, framing AI tools as scaffolds that extend learning through personalized feedback. Kluger and DeNisi’s Feedback Intervention Theory (1996) highlights that task-focused feedback, whether generated by AI or teachers, clarifies errors and sustains motivation. Bandura’s Self-Efficacy Theory (1977) underscores confidence as a determinant of effort and persistence, aligning with the study’s focus on writing anxiety. Finally, Krashen’s Second Language Acquisition Theory (1982) stresses comprehensible input and low-stress environments, situating language exposure as essential for vocabulary, grammar, and writing structure. By integrating these perspectives, the framework provides a coherent basis for examining how AI use, teacher feedback, writing anxiety, and language exposure collectively influence Grade 9 students’ writing performance.

Conceptual Framework

The conceptual framework of this study explores the relationship between four independent variables—AI utilization, teacher feedback quality, writing anxiety, and language exposure—and the dependent variable, students’ writing skills. AI utilization involves tools such as Grammarly, QuillBot, or Turnitin that support grammar, vocabulary, and self-directed learning, while teacher feedback quality emphasizes clear and specific guidance that aids revision. Writing anxiety, shaped by self-efficacy deficits, fear of negative evaluation, and time constraints, may hinder performance, whereas language exposure reflects students’ engagement with English through reading, speaking, and media use inside and outside the classroom. Writing skills, assessed in vocabulary, grammar, organization, coherence, and mechanics, serve as the dependent variable. The framework assumes that these four independent variables, individually or collectively, significantly associate with Grade 9 students’ writing performance in interconnected ways.

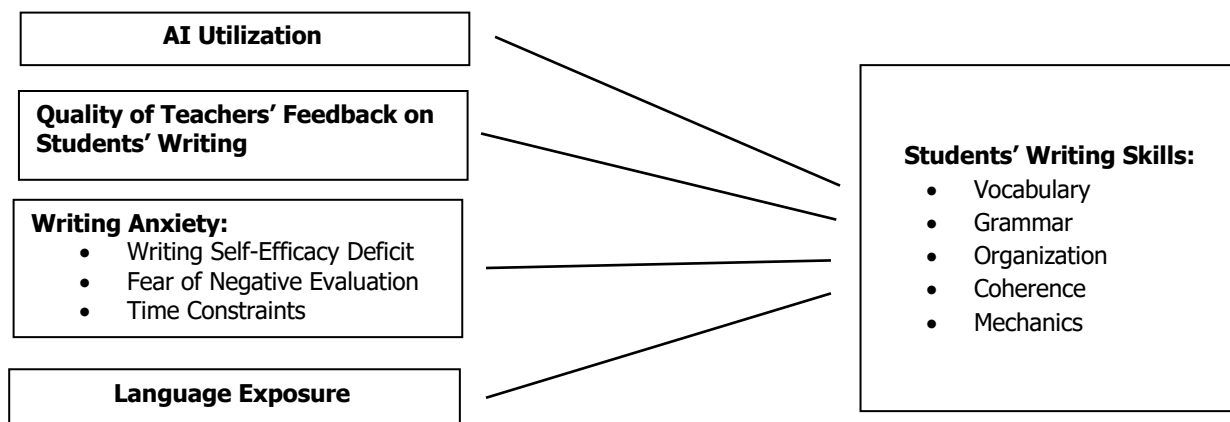


Figure 1. Schematic Presentation of the Study

Statement of the Problem

Writing is an essential skill for academic success; however, many Grade 9 students continue to struggle with vocabulary, grammar, organization, coherence, and mechanics. These challenges affect their ability to express ideas clearly and produce effective written outputs. Several factors may influence students' writing performance, including writing anxiety, limited language exposure, and the quality of teacher feedback, which are associated with how students approach and perform in writing tasks.

With the increasing use of artificial intelligence (AI) in education, new opportunities have emerged to support student writing. AI tools can assist learners in correcting grammar, refining sentence structure, and improving vocabulary. When combined with meaningful teacher feedback and language-rich learning environments, AI utilization may enhance writing performance. However, the extent to which AI use, teacher feedback, writing anxiety, and language exposure are associated with students' writing skills remains uncertain.

Given these concerns, there is a need to systematically examine the association of AI utilization, teacher feedback, writing anxiety, and language exposure with the writing skills of Grade 9 students. Identifying how these factors relate to writing performance is important for strengthening instructional practices and designing targeted interventions that can improve students' writing competencies and engagement in academic writing tasks.

Research Objectives

General Objective

To examine the association of AI utilization, quality of teachers' feedback, writing anxiety, and language exposure with the writing skills of Grade 9 students—specifically vocabulary, grammar, organization, coherence, and mechanics—as a basis for proposing targeted instructional strategies to enhance their writing performance.

Specific Objectives

1. To assess the level of participants' AI utilization in completing their writing tasks or assignments.
2. To evaluate the participants' assessment of their teachers' quality feedback on writing.
3. To assess the participants' writing anxiety in terms of:
 - 3.1 Writing Self-Efficacy Deficit
 - 3.2 Fear of Negative Evaluation
 - 3.3 Time Constraints.
4. To measure the extent of participants' English language exposure.
5. To assess the participants' level of writing skills in terms of:
 - 5.1 Vocabulary
 - 5.2 Grammar
 - 5.3 Organization
 - 5.4 Coherence
 - 5.5 Mechanics
6. To determine whether AI utilization, teacher feedback, writing anxiety, and language exposure are significantly associated with Grade 9 students' writing skills.

Research Questions

1. What is the level of participants' AI utilization in completing their writing tasks or assignments?
2. What is the participants' assessment of their teachers' quality feedback on writing?
3. What is the level of participants' writing anxiety in terms of:
 - 3.1 Writing Self-Efficacy Deficit
 - 3.2 Fear of Negative Evaluation
 - 3.3 Time Constraints?
4. What is the extent of participants' English language exposure?
5. What is the participants' level of writing skills in terms of:
 - 5.1 Vocabulary
 - 5.2 Grammar
 - 5.3 Organization
 - 5.4 Coherence

5.5 Mechanics?

6. Are AI utilization, teacher feedback, writing anxiety, and language exposure significantly associated with Grade 9 students' writing skills?

Hypotheses

H₀₁: There is no significant association between AI utilization and Grade 9 students' writing skills.

H₀₂: There is no significant association between the quality of teachers' feedback and Grade 9 students' writing skills.

H₀₃: There is no significant association between writing anxiety and Grade 9 students' writing skills.

H₀₄: There is no significant association between language exposure and Grade 9 students' writing skills.

METHODS

Research Design

The study employed a descriptive-correlational research design, a non-experimental approach that examines the association among variables without manipulation (Creswell & Poth, 2018). Data on AI utilization, teacher feedback, writing anxiety, language exposure, and Grade 9 writing skills were collected through surveys and writing tasks, then analyzed using descriptive and inferential statistics. This design was appropriate because it allowed the researcher to describe the current situation of struggling writers and determine associations among the variables under natural classroom conditions (Johnson & Christensen, 2020). The findings provide meaningful insights to guide instructional decisions for improving writing in secondary education.

Population and Sampling

This study involved 120 Grade 9 students identified as struggling writers from a public secondary school in the Jasaan District, Misamis Oriental, which is part of the Philippine K–12 public secondary system covering Grades 7–12, with Junior High School (Grades 7–10) focusing on core subjects and Senior High School (Grades 11–12) offering specialized tracks. Participants were determined through a preliminary writing assessment conducted by their English teachers, where those who consistently performed below satisfactory level in at least two consecutive writing tasks were classified as struggling writers. The sampling technique used was purposive sampling (criterion sampling), since students were selected based on specific inclusion criteria such as prior exposure to gadgets or AI related applications. Exclusion criteria included irregular attendance, lack of a gadget, or learning difficulties that directly affected writing. To ensure fairness, class records were checked for eligibility, and three inter-raters evaluated all compositions using a standardized rubric. Participation was voluntary, with no effect on grades or teacher relationships.

Instruments

The study employed both adapted and researcher-made instruments. Four adapted tools included a student survey on AI utilization, a feedback evaluation form, a writing anxiety questionnaire, and a language exposure survey, while two researcher-made writing tasks—a composition on the impact of social media and an argumentative essay on limiting its use—were designed in alignment with academic standards. All instruments were validated through expert review by five expert validators (two research specialists and three language teachers), ensuring content validity, contextual appropriateness, and alignment with academic requirements. The written outputs were further assessed using a standardized rubric on vocabulary, grammar, organization, coherence, and mechanics, scored independently by three trained raters. Inter-rater reliability statistics were computed using Krippendorff's alpha to confirm consistency among raters, thereby guaranteeing fairness, reliability, and accuracy in the evaluation process.

Data Collection

Data collection was conducted in a structured manner during the School Year 2025–2026, with validated surveys and researcher-made writing tasks administered to 120 Grade 9 students at a public secondary school in Jasaan District, Misamis Oriental. The instruments were administered during regular class periods over three consecutive school days to maximize participation and minimize disruption, with schedules coordinated with advisers to ensure smooth implementation. Clear instructions were provided to enhance understanding and completion of the surveys and tasks, which included a composition on the impact of social media and an argumentative essay on limiting its use. The researcher monitored the sessions, provided support and breaks when needed, and ensured that

the process was systematic, organized, and aligned with academic standards to maintain the integrity of the data collected.

Treatment of Data

The study applied both descriptive and inferential statistical analyses to examine AI utilization, teacher feedback quality, writing anxiety, language exposure, and Grade 9 students' writing skills. Descriptive statistics such as mean, standard deviation, percentage, and frequency were computed to summarize survey responses and writing task scores, with results presented in tables for clarity. For inferential analysis, Canonical Correlation Analysis (CCA) was used to determine the extent to which the independent variables were associated with writing skills in vocabulary, grammar, organization, coherence, and mechanics. This statistical treatment identified the strength and direction of multivariate associations, showing both combined and individual contributions of predictors. By directly applying these methods to the collected data, the study generated valid insights that inform instructional decisions and targeted interventions for improving writing performance in secondary education.

Ethical Considerations

The study followed proper ethical standards. Approval was obtained from the LC Research Ethics Committee, and permission was given by school authorities. Students and their parents or guardians signed informed consent forms, ensuring participation was voluntary and withdrawal was allowed anytime. Confidentiality was protected by coding responses and limiting access to the researcher and statistician. Data were stored securely, password-protected, and deleted after the study. Participation caused no harm, grades were not affected, and small tokens of thanks were given without influencing involvement.

RESULTS and DISCUSSION

This section presents the results and discussion on Grade 9 students' AI utilization, teacher feedback, and writing skills in grammar, vocabulary, organization, coherence, and mechanics. It includes the level of AI use, indicators of feedback practices, and the statistical links among these variables, supported by relevant literature.

Level of participants' AI utilization in completing their writing tasks or assignments

Table 1 shows the descriptive statistics of Grade 9 students' AI use in writing tasks. The overall mean of 3.13 indicates a *moderate* level, meaning students use AI sometimes but not regularly. Most students (65.00%) are in the *moderate* category, 21.67% in *high*, and 13.33% in *low*, with none in *very high* or *very low*. This suggests AI helps but is not their main writing support, similar to Palmes and Barcelona (2025), who found moderate use for grammar and polishing.

Table 1

Descriptive Statistics of AI Utilization Among Grade 9 Students

Statements	Mean	Description	SD
1. I use AI tools like Grammarly or QuillBot to improve my grammar.	3.20	Neutral	1.07
2. AI tools help me identify and correct writing errors.	3.37	Neutral	1.03
3. I revise my work more because of feedback from AI.	3.04	Neutral	0.96
4. I use AI tools before submitting my writing tasks.	2.89	Neutral	1.04
5. I use AI to improve how I rephrase my sentences.	3.48	Neutral	0.98
6. I use AI tools to improve my vocabulary in writing.	3.09	Neutral	1.03
7. I have become more confident in writing because of AI assistance.	2.82	Neutral	1.05
8. I use AI to correct my grammatical constructions.	3.22	Neutral	0.96
9. I believe using AI improves the overall quality of my writing.	2.98	Neutral	0.91
10. I use AI tools for writing assignments.	3.23	Neutral	1.04
Overall	3.13	Neutral	0.51

Legend:

4.51 – 5.00 = Very High; 3.51 – 4.50 = High; 2.51 – 3.50 = Moderate; 1.51 – 2.50 = Low; 1.00 – 1.50 = Very Low

The highest-rated indicator is "I use AI to improve how I rephrase my sentences" ($M=3.48$), interpreted as *neutral*. This shows that students value AI for clarity and organization. Dingal et al. (2024) emphasized its role in

vocabulary and grammar improvement, while Flores & Barcelona (2025) highlighted its usefulness in refining sentence structure.

On the other hand, the lowest-rated indicator is "I have become more confident in writing because of AI assistance" ($M=2.82$), also interpreted as *neutral*. This suggests that while AI supports corrections, it does not significantly boost confidence. Paurillo (2025) found that teacher feedback interventions lead to stronger achievement gains than automated corrections. This suggests that while AI can support surface-level improvements, confidence and deeper understanding still rely on teacher guidance.

Overall, all indicators were rated *neutral*, meaning students see AI as helpful but not something they depend on heavily. Garcia & Lopez (2025) stressed that learners rely on AI mainly for quick fixes but still depend on teachers for deeper guidance, showing that while AI is a supportive partner, teachers remain the most important source of confidence-building and writing growth.

Participants' assessment of their teachers' quality feedback on writing

Table 2 shows that Grade 9 students perceive teacher feedback positively, with an overall mean of 3.52 (*High*). More than half (50.83%) rated feedback as *high* and 41.67% as *moderate*, while only a few gave low ratings. This indicates that students generally find teacher comments clear and helpful, consistent with Paurillo (2025), who emphasized that feedback interventions are essential for improving performance by guiding revisions, clarifying errors, and strengthening confidence in writing.

Table 2

Descriptive Statistics of Teachers' Quality Feedback Among Grade 9 Students

Statements	Mean	Description	SD
1. My teacher gives detailed feedback on my writing tasks.	3.59	Agree	0.88
2. Feedback from my teacher helps me improve my writing.	3.88	Agree	0.86
3. I understand my mistakes better because of my teacher's feedback.	3.78	Agree	1.05
4. My teacher's feedback is clear and specific.	3.62	Agree	1.00
5. I receive feedback on both content and grammar.	3.23	Neutral	0.91
6. Feedback is given soon after I submit my work.	3.20	Neutral	0.92
7. My teacher explains how to improve my writing clearly.	3.78	Agree	0.97
8. The feedback helps me revise my writing more effectively.	3.48	Neutral	1.00
9. I find teacher feedback more helpful than AI suggestions.	3.36	Neutral	1.15
10. I receive both written and verbal feedback from my teacher.	3.28	Neutral	1.07
Overall	3.52	Agree	0.55

Legend:

4.51 – 5.00 = Very High; 3.51 – 4.50 = High; 2.51 – 3.50 = Moderate; 1.51 – 2.50 = Low; 1.00 – 1.50 = Very Low

Looking at specific indicators, the highest-rated indicator was "Feedback from my teacher helps me improve my writing" ($M=3.88$, $SD=0.86$), interpreted as *Agree*. This shows that students strongly value teacher feedback as a tool for revising and improving their work. Paurillo (2025) similarly reported that students view teacher feedback as a key factor in strengthening their motivation, self-confidence, and overall learning performance. Likewise, Charalampous & Darra (2023) highlighted that teacher feedback significantly contributes to learners' ability to revise and enhance their written work.

By contrast, the lowest-rated indicator was "Feedback is given soon after I submit my work" ($M=3.20$, $SD=0.92$), interpreted as *Neutral*. This suggests that while students appreciate feedback, they sometimes experience delays in receiving it. Mao & Lee (2023) explained that prompt feedback is more effective, and delays may be due to workload or task type. Rui Yu and Lijun Yang (2021) found that the effectiveness of teacher feedback depends on its quality and timeliness, as prompt and clear feedback encourages students to revise and improve their writing.

Overall, the ratings reveal that teacher feedback is valued and effective, but improvements in timing and coverage are needed. Utami & Arianti (2023) stressed that guidance becomes more meaningful when students are given time to revise and apply corrections.

Level of Participants' Writing Anxiety Considering Self-Efficacy Deficit, Negative Evaluation, and Time Constraints

Table 3 presents the summary of Grade 9 students' writing anxiety across three dimensions: self-efficacy deficit, negative evaluation, and time constraints. The overall mean score is 3.42, with $SD=0.59$, indicating a *moderate* to *high* level of anxiety. This shows that learners often feel pressured when writing, especially under time limits. Palmes & Barcelona (2025) noted that time pressure is a common source of stress in writing, while supportive feedback and confidence-building activities can help reduce anxiety.

Table 3

Summary Table of Writing Anxiety Dimensions Among Grade 9 Students

Dimension	Mean	Interpretation	SD
Writing Self-Efficacy Deficit	3.20	Moderate	0.57
Fear of Negative Evaluation	3.48	Moderate	0.62
Time Constraints	3.57	High	0.58
Overall	3.42	Moderate	0.59

Legend:

4.51 – 5.00 = Very High; 3.51 – 4.50 = High; 2.51 – 3.50 = Moderate; 1.51 – 2.50 = Low; 1.00 – 1.50 = Very Low

Looking at specific dimensions, time constraints scored the highest ($M=3.57$, $SD=0.58$, *High*), showing that students often feel rushed, make mistakes, and struggle to organize ideas when writing under limited time. Fear of negative evaluation followed with $M=3.48$, $SD=0.62$ (*Moderate*), indicating that many learners worry about grades, teacher comments, and peer judgment. Writing self-efficacy deficit had the lowest ($M=3.20$, $SD=0.57$, *Moderate*), meaning students have some confidence but still feel unsure about their writing skills.

The higher standard deviation for fear of negative evaluation ($SD=0.62$) compared to self-efficacy ($SD=0.57$) and time constraints ($SD=0.58$) suggests greater variation in how students respond to criticism and evaluation. Some learners may feel highly anxious about teacher or peer feedback, while others are less affected. Palmes and Barcelona (2025) explained that supportive feedback and peer review can reduce stress and encourage participation.

Overall, the ratings reveal that writing anxiety is influenced most by time pressure and fear of evaluation, while self-efficacy plays a smaller but still important role. Santri et al. (2022) emphasized that reflection journals, confidence-building activities, and clear time-management strategies can help students overcome anxiety. These findings suggest that schools should strengthen supportive practices and provide structured opportunities for learners to manage time and build confidence in writing.

Level of participants' English language exposure

Table 4 shows that Grade 9 students have a *moderate level* of English exposure ($M=3.13$, $SD=0.59$), with most (54.17%) in the *moderate* category and 28.33% reporting *high* exposure. Learners often encounter English through songs, movies, or webpages, but these are mostly passive forms. Ramos (2023) observed that while such exposure builds familiarity, it does not automatically lead to stronger active use or writing proficiency. The results on writing challenges highlight the importance of creating interactive opportunities where students can apply English in both social and academic contexts.

Table 4

Level of Participants' English Language Exposure

Statements	Mean	Description	SD
1. I listen to songs in English.	4.23	Agree	1.03
2. I browse webpages that are written in English.	3.04	Neutral	1.13
3. I watch movies in English.	4.05	Agree	1.17
4. I read books written in English.	3.63	Agree	0.98
5. I watch TV shows in English.	3.7	Agree	1.11
6. I read newspapers written in English.	2.28	Disagree	1.17
7. I chat online in English.	2.86	Neutral	0.84
8. I send text messages in English.	2.87	Neutral	0.79
9. I talk with my friends in English.	2.32	Disagree	0.91
10. I converse in English among my family.	2.31	Disagree	0.91

Overall	3.13	Neutral	0.59
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Legend:

4.51 – 5.00 = Very High; 3.51 – 4.50 = High; 2.51 – 3.50 = Moderate; 1.51 – 2.50 = Low; 1.00 – 1.50 = Very Low

The highest-rated items were *listening to songs* ($M=4.23$) and *watching movies* ($M=4.05$), showing that media is the main source of exposure. While this builds vocabulary and listening skills (Maulida & Warni, 2024), it does not always improve speaking. In contrast, the lowest ratings—*talking with friends* ($M=2.32$) and *conversing with family* ($M=2.31$)—reflect limited active use, as students prefer their mother tongue in informal settings (Oda & Vizconde, 2021).

Overall, students gain familiarity with English through media but lack interactive practice. Soriano and Garcia (2021) stressed that passive exposure alone cannot build proficiency, and collaborative speaking activities are recommended to strengthen fluency and confidence. More chances to use English in everyday conversations can help students turn what they learn from media into real communication skills.

Participants' level of writing skills in terms of vocabulary, grammar, organization, coherence, and mechanics

Table 5 presents the summary of Grade 9 students' writing skills across five areas: vocabulary, grammar, organization, coherence, and mechanics. The overall mean score is $M=1.65$, $SD=0.71$, interpreted as *Fair*, meaning learners can perform basic writing tasks but still face significant challenges. Vocabulary scored highest ($M=1.81$), followed by mechanics ($M=1.68$), while grammar ($M=1.64$), organization ($M=1.58$), and coherence ($M=1.54$) were lower. This pattern suggests that students manage simple word use and basic mechanics but struggle more with sentence accuracy, idea organization, and smooth connection of thoughts.

Table 5

Summary Table of Participants' Writing Skills (Vocabulary, Grammar, Organization, Coherence, and Mechanics)

Dimension	Mean	Interpretation	SD
Vocabulary	1.81	Fair	0.77
Grammar	1.64	Fair	0.68
Organization	1.58	Fair	0.66
Coherence	1.54	Fair	0.66
Mechanics	1.68	Fair	0.77
Overall	1.65	Fair	0.71

Legend:

4.51 – 5.00 = Very Good; 3.51 – 4.50 = Good; 2.51 – 3.50 = Average; 1.51 – 2.50 = Fair; 1.00 – 1.50 = Poor

Vocabulary scored highest ($M=1.81$), followed by mechanics ($M=1.68$), while coherence had the lowest ($M=1.54$). This pattern suggests that students manage simple word use and basic mechanics but struggle more with sentence flow and idea connection. Flores and Barcelona (2025) noted that practical strategies such as using checklists and reading aloud can help learners catch errors and improve overall writing quality.

Overall, the "Fair" ratings across all areas show that students need structured support in vocabulary building, grammar practice, and paragraph organization. Ramos (2023) highlighted that editing practice and peer review build confidence and help learners write more clearly and correctly.

Relationship between AI utilization and writing skills among Grade 9 students

Table 6 shows the results of the Canonical Correlation Analysis (CCA) examining the relationship between AI utilization and writing skills among Grade 9 students. The analysis yielded a statistically significant relationship, $F(5, 114) = 3.008$, $p = 0.014$, with a canonical correlation coefficient of $R = 0.341$. This corresponds to $R^2 = 0.116$, meaning that 11.6% of the variance in the combined writing skills is explained by AI utilization. Since the p-value is below the 0.05 level, the result indicates a meaningful association between the two variable sets.

Table 6*Canonical Correlation Analysis Between AI Utilization and Writing Skills Among Grade 9 Students*

Variable	Cross loading	R	R ²	F(5, 114)	P
AI Utilization	0.34				
Writing Skills					
Vocabulary	0.23				
Grammar	0.29	0.341	0.116	3.008*	0.014
Organization	0.23				
Coherence	0.22				
Mechanics	0.18				

*Significant at 0.05 two-tailed alpha level.

Based on these findings, the null hypothesis H_{01} stating that "There is no significant association between Grade 9 students' AI utilization and their writing skills" is rejected. This means there is a statistically significant but weak association between the two variables. Grammar (0.29) showed the strongest link, followed by vocabulary (0.23), organization (0.23), coherence (0.22), and mechanics (0.18).

The results suggest that AI tools are most effective in grammar support. Barrot (2021) reported that learners often rely on AI-driven corrective feedback systems to check verb tenses and sentence structure, while Chhabriya, Babu, & Kumari (2024) explained that repeated AI feedback helps learners notice grammar mistakes more easily.

Lower values for other skills highlight that AI is less effective for deeper aspects of writing such as idea development and logical flow. Putra (2023) emphasized that AI works best when combined with teacher explanations so students understand corrections and learn to revise, plan, and express ideas clearly.

Relationship between the quality of teachers' feedback and writing skills among Grade 9 students

Table 7 shows the Canonical Correlation Analysis (CCA) between the quality of teachers' writing feedback and Grade 9 students' writing skills. The results reveal a statistically significant relationship, $F(5, 114) = 4.545$, $p < 0.001$, with a canonical correlation of $R = 0.408$. This value indicates a moderate positive association, while the R^2 value of 0.166 means that 16.6% of the variance in the writing skills canonical variates can be explained by teacher feedback. Because the p-value is less than 0.05, the null hypothesis H_{02} , which states that "There is no significant association between the quality of teachers' writing feedback and students' writing skills", is rejected. This means teacher feedback plays a meaningful role in shaping students' writing performance.

Table 7*Canonical Correlation Analysis Between Quality of Teacher's Feedback and Writing Skills Among Grade 9 Students*

Variable	Cross loading	R	R ²	F(5, 114)	P
Quality of Teacher's Feedback	0.41				
Writing Skills					
Vocabulary	0.36				
Grammar	0.37	0.408	0.166	4.545*	<0.001
Organization	0.30				
Coherence	0.33				
Mechanics	0.36				

*Significant at 0.01 two-tailed alpha level.

Based on these findings, grammar (0.37) showed the strongest link with teacher feedback, followed by vocabulary (0.36) and mechanics (0.36). This indicates that clear teacher feedback improves grammatical accuracy, word choice, and writing conventions. Paurillo (2025) likewise found that teacher feedback plays a major role in improving students' learning performance, confidence, and skill development, supporting the idea that constructive feedback strengthens writing accuracy.

Coherence (0.33) and organization (0.30) also benefited from teacher feedback, showing that constructive comments guide students in connecting ideas and structuring paragraphs. Gou et al. (2025) noted that students value teacher comments more than AI corrections because they provide explanation, context, and personal guidance. The CCA confirms that strong feedback practices enhance multiple dimensions of writing skills.

Relationship between writing anxiety and writing skills among Grade 9 students

Table 8 introduces the Canonical Correlation Analysis (CCA) results on the relationship between Writing Anxiety and Writing Skills among Grade 9 students. The data reveal a statistically significant association, $F(15, 310) = 2.086$, $p = 0.010$, $R = 0.467$, $R^2 = 0.218$. The correlation coefficient indicates a *moderate negative relationship* between writing anxiety and writing performance. This means that as writing anxiety changes, writing skills also change in a noticeable way. The value of R^2 shows that writing anxiety accounts for about 21.8% of the variation in writing skill scores. Because the p-value is below the 0.05 level, the relationship is considered significant.

Table 8

Canonical Correlation Analysis Between Writing Anxiety and Writing Skills Among Grade 9 Students

Variable	Cross loading	R	R ²	F(15, 310)	P
Writing Anxiety					
Writing Self-Efficacy	-0.31				
Fear of Negative Evaluation	-0.39				
Time Constraints	-0.44				
Writing Skills		0.467	0.218	2.086*	0.010
Vocabulary	-0.42				
Grammar	-0.42				
Organization	-0.41				
Coherence	-0.45				
Mechanics	-0.42				

*Significant at 0.05 two-tailed alpha level.

Time constraints (-0.44) and fear of negative evaluation (-0.39) were the strongest anxiety factors, while coherence (-0.45) showed the largest negative link among writing skills. These results suggest that higher anxiety levels affect multiple areas of writing. Aziz & Kashinathan (2021) noted that anxiety can sometimes motivate students to be more cautious, leading to improvements in grammar and organization.

Overall, while moderate anxiety may encourage careful writing, excessive anxiety can harm confidence and coherence. Cardente-Cañetan, Hubac-Lasparilla, and Paglinawan (2024) found that writing anxiety negatively affects students' ability to write clearly and confidently, showing that supportive environments and clear instructions are essential to balance motivation with reduced anxiety.

Relationship between language exposure and writing skills among Grade 9 students

Table 9 highlights the relationship between Language Exposure and Writing Skills among Grade 9 students. The results of the Canonical Correlation Analysis (CCA) show a statistically significant association, $F(5, 114) = 9.663$, $p < 0.001$, with a canonical correlation of $R = 0.546$, interpreted as a moderate positive relationship. This means that as students' exposure to English increases, their writing performance also tends to improve. The coefficient of determination ($R^2 = 0.298$) indicates that 29.8% of the variance in the combined writing skill components can be explained by their level of language exposure. The cross-loadings reveal that grammar (0.53) and organization (0.53) contributed the most, followed by coherence (0.51), vocabulary (0.49), and mechanics (0.47). These findings align with Maulida and Warni (2024), who found that regular exposure to English media, particularly movies, helps learners expand vocabulary and improve overall language proficiency, which can support the development of stronger writing skills.

Table 9

Canonical Correlation Analysis Between Language Exposure and Writing Skills Among Grade 9 Students

Variable	Cross loading	R	R ²	F(5, 114)	p
Language Exposure	0.55				
Writing Skills		0.546	0.298	9.663*	<0.001
Vocabulary	0.49				
Grammar	0.53				

Organization	0.53
Coherence	0.51
Mechanics	0.47

*Significant at 0.01 two-tailed alpha level.

Grammar and organization (0.53) showed the strongest links, followed by coherence (0.51), vocabulary (0.49), and mechanics (0.47). This suggests that frequent exposure to English—through reading, listening, or communication—helps students internalize grammar, structure ideas, and expand vocabulary. Barroga & Matanguihan (2021) emphasized that consistent exposure supports sentence flow and idea connection, while Taye & Mangesha (2024) noted that active engagement inside and outside the classroom builds stronger writing habits.

Overall, students regularly exposed to English tend to write more confidently and effectively, especially in grammar and organization. Exposure also supports coherence, vocabulary, and mechanics, helping students connect ideas and use language more accurately. Consistent engagement with English builds stronger writing habits and improves overall performance.

Taken together, these findings may provide practical directions for improving writing instruction and support at different levels of education. The results suggest that teachers may balance AI use with clear, timely feedback and activities that reduce writing anxiety, while curriculum designers may integrate AI literacy, structured feedback, and confidence-building strategies into writing programs. School leaders may support teachers through training and manageable workloads to ensure feedback remains effective, and teacher education programs may prepare future educators to use AI responsibly and provide constructive feedback that strengthens students' writing skills.

Conclusions

The study concludes that Grade 9 students demonstrate a fair level of writing performance across vocabulary, grammar, organization, coherence, and mechanics. While teacher feedback, AI utilization, and moderate English exposure provide some support, students' writing skills remain constrained by passive engagement with language and writing anxiety. These conditions explain why learners often struggle to generate, organize, and connect ideas effectively in written tasks.

The findings further indicate that grammar and vocabulary benefit most from teacher feedback and AI-assisted tools, while coherence and organization remain weaker areas requiring targeted instructional support. Students rely heavily on media-based exposure to English, which enhances vocabulary and listening skills but does not sufficiently strengthen speaking and writing proficiency. Writing anxiety also influences students' confidence and performance, while teacher feedback—although generally rated high—requires greater consistency and emphasis on actionable revisions.

Overall, the results highlight the importance of integrating responsible AI use, effective teacher feedback, structured writing practice, and supportive learning environments to enhance writing competence among secondary learners. These findings contribute to improving instructional practices, strengthening writing pedagogy, and informing school-based strategies for developing students' academic writing skills.

Recommendations

Based on the findings and conclusions, the following recommendations are offered:

1. **English language teachers** may provide guided writing activities, clear and timely feedback, and supportive classroom routines that reduce writing anxiety. Teachers may also integrate responsible use of AI tools to assist students in vocabulary development, grammar correction, and revision practices.
2. **School administrators** may support professional development programs that enhance teachers' skills in writing instruction, feedback strategies, and technology-enhanced learning. Schools may also provide resources that encourage meaningful English exposure and responsible use of AI tools in academic writing.
3. **Students** may gradually engage in regular reading and writing activities, practice responsible AI use as a supplementary learning tool, and adopt manageable writing routines such as drafting, revising, and peer feedback to strengthen writing skills and reduce anxiety.
4. **Curriculum developers and teacher education programs** may consider incorporating instructional strategies that address writing anxiety, promote interactive language exposure, and integrate AI-supported writing practices within language learning curricula.
5. **Future researchers** may explore additional factors affecting writing performance, conduct studies across different grade levels and learning contexts, examine the long-term effects of AI-assisted writing tools, and design intervention programs that support struggling writers.

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