The Influence of Artificial Intelligence in the College Students' Language Achievement

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ABSTRACT

This study examined the influence of Artificial Intelligence (AI) on the language achievement of college students, focusing on grammar and reading comprehension proficiency. Using a quantitative descriptive-correlational design, the research involved 407 second-year students from both public and private higher education institutions in Cagayan de Oro City, Philippines. Data were gathered using the English Language Achievement Test (ELAT) and a Perception on AI Use in Learning Survey. Descriptive and inferential analyses—including Pearson correlation, t-tests, and ANOVA—were conducted to identify relationships and differences across demographic variables and frequency of AI use. Results revealed that students held a positive perception of AI as an effective aid in language learning ($M = 4.21$, $SD = 0.52$) and achieved satisfactory to proficient performance levels in English. A moderate positive correlation ($r = 0.47$, $p < 0.01$) was found between students' perceptions of AI and their language achievement, with frequent AI users scoring significantly higher than occasional or rare users. No significant differences were observed across sex or school type. The findings affirm that regular engagement with AI-based tools such as Grammarly, ChatGPT, and Duolingo enhances students' grammatical accuracy and reading comprehension. The study underscores AI's potential as a supportive partner in language education, advocating for its balanced integration into curricula alongside teacher guidance and digital literacy training.

Keywords: Artificial Intelligence (AI); Language Achievement; Grammar Proficiency; Reading Comprehension; Higher Education

INTRODUCTION

Language achievement shows how well someone learns a new language, including their grammar, vocabulary, understanding, and ability to communicate. In recent years, Artificial Intelligence (AI) has rapidly changed the way we approach language learning. Now, students can benefit from systems that adjust to their individual needs and provide real-time feedback. Tools like intelligent tutors, chatbots, writing assistants, and speech recognition are making the learning process more interactive and supportive. Worldwide, colleges and universities are increasingly adopting these technologies, supplementing—or even replacing—traditional teaching methods [1],[2].

AI technology is transforming language education by offering personalized learning experiences. Unlike conventional classroom settings, AI-driven tools can tailor instruction to each individual, providing instant feedback and assessment. Hartley highlights that AI language platforms give learners ongoing, individualized feedback, which helps them improve in specific areas like grammar, comprehension, and overall proficiency [3]. These adaptive tools analyze errors, understand each learner's level, and then generate customized practice activities, ultimately enhancing second language acquisition.

Language achievement measures how well someone uses language, and it covers both understanding—through reading and listening—and expressing—through writing and speaking. With the rise of AI-based tools like Duolingo and ChatGPT, learners now have access to interactive activities, instant feedback, and tailored guidance. According to Zhang and Lu [4], such technologies create more engaging language learning experiences, which help learners improve their skills. The authors add that AI does more than teach grammar and vocabulary; it also builds confidence and communication skills. As a result, research on how AI affects language achievement is increasingly important in applied linguistics and educational technology.

While AI is now a familiar presence in language education, there isn't much clear evidence yet about its direct impact on students' language achievement. This is especially true in settings where not everyone has the same access to AI-powered systems. Many earlier studies [5]-[7] have either looked at the general benefits of AI or at how it influences students' motivation, leaving a gap when it comes to understanding its effect on concrete skills like grammar and reading.

This study sets out to address that gap by focusing specifically on language achievement as its own area. The research recognizes that although motivation and self-regulation play a role in learning, what ultimately matters is how proficient learners actually become. By evaluating grammar and reading comprehension scores, the study aims to see if—and how—AI-powered tools lead to real improvements. As Chen et al. [2] suggest, the use of personalized AI systems like intelligent tutors can significantly enhance the quality of education, adapting to each learner's unique pace and ability.

This investigation is also part of a wider move toward Technology-Enhanced Language Learning (TELL), with AI as a central component. Particularly in Philippine higher education, where AI-based platforms are becoming more common, understanding their effectiveness will provide

valuable, real-world evidence for educators and policymakers seeking to modernize language instruction.

Statement of the Problem

This study aimed to determine the influence of Artificial Intelligence (AI) on students' language achievement. Specifically, it sought to answer the following questions:

1. What is the profile of the respondents in terms of:
   - Sex
   - Course
   - Type of School
   - Frequency of AI use
2. What is the respondents' perception of AI in terms of:
   - Aid in Language Learning
   - Effectiveness and Accuracy of AI Tools
   - Confidence in Using AI
3. What is the respondents' Language Achievement Proficiency Level in terms of:
   - Grammar
   - Reading Comprehension
4. Is there a significant relationship between the respondents' perception of AI and their Language Achievement Proficiency Level?
5. Is there a significant difference in Language Achievement across demographic variables (sex, course, type of school, and frequency of AI use)?

These research questions frame the quantitative focus of this investigation and direct attention to the measurable outcomes of language learning in AI-mediated environments.

Significance of the Study

The findings of this research are expected to contribute valuable insights to several sectors of education:

- Educators and Language Teachers: Results provide empirical evidence on how AI-driven systems affect students' mastery of linguistic components, thereby guiding teachers in incorporating appropriate AI tools into their teaching strategies.
- Students and Language Learners: Understanding how AI enhances grammatical accuracy and reading comprehension empowers learners to utilize technology effectively in their self-study practices.
- Educational Institutions: Findings can inform decision-making on resource allocation, curriculum design, and technology adoption in language programs.
- AI Developers and EdTech Companies: Feedback from this research may assist developers in refining existing platforms like Duolingo, ChatGPT, and other language-learning applications to better address learners' needs and challenges.
- Researchers in Applied Linguistics: This study contributes to the body of knowledge on the relationship between AI and measurable language achievement outcomes, offering a basis for future longitudinal or experimental research.

Scope and Limitation

This study was limited to examining the influence of AI on language achievement among second-year college students enrolled in selected higher education institutions in Cagayan de Oro City, including Tagoloan Community College, the University of Science and Technology of Southern Philippines (USTP), and Southern Philippine College (SPC). The participants were enrolled during the first semester of the academic year 2024–2025. A total of 407 respondents participated, selected through random sampling using Slovin's formula. They were drawn from the programs of Education, Information Technology, and Business Administration, with 191 students from public institutions and 216 from private institutions.

The study utilized the English Language Achievement Test developed by Oted et al. [16], which assessed two primary domains of language proficiency: grammar and reading comprehension. The investigation did not include other constructs such as L2 motivation and self-regulated learning, although these variables were part of the broader research from which this study was derived. The study was also confined to AI use in language learning platforms accessible during the study period and did not account for other external factors influencing language learning outcomes, such as socioeconomic status or prior English exposure.

Theoretical Framework

Grounded in Cognitive Learning Theory and principles of Computer-Assisted Language Learning (CALL), this study recognizes that language is learned most effectively through active engagement and responsive feedback. AI-driven technologies support this by replicating realistic dialogues and delivering personalized feedback, which helps learners improve accuracy and comprehension. Roll and Wylie [6] highlighted that AI's educational success relies on integrating solid pedagogical foundations that address the diverse needs of learners. Linking AI with these cognitive frameworks gives students targeted support, encouraging deeper understanding and long-term retention.

Additionally, Long's [8] Input-Interaction-Output Hypothesis reinforces this perspective, suggesting that genuine progress in language comes from purposeful interaction and feedback—elements that AI systems are uniquely suited to offer. These combined theories underscore the value of AI in building essential language skills like grammar and reading comprehension.

METHODOLOGY

Research Design

This study employed a quantitative descriptive-correlational design to determine the influence of Artificial Intelligence (AI) on students' language achievement. The descriptive aspect of the research aimed to identify and describe the respondents' proficiency levels in grammar and reading comprehension, while the correlational aspect examined the relationship between their perceptions of AI use and their language achievement outcomes.

This approach was chosen because it allows the researcher to analyze naturally occurring variations among respondents without manipulating variables, thereby offering a realistic depiction of AI's role in academic contexts. As emphasized by Roll and Wylie [6], educational

research that explores the integration of AI benefits from correlational methods to understand how specific technological factors are associated with performance outcomes.

Moreover, this design was deemed appropriate for identifying whether a significant relationship exists between the respondents' use and perception of AI in language learning and their measured proficiency levels, as operationalized through test results in grammar and reading comprehension. The study's framework assumes that increased or more effective engagement with AI tools can lead to measurable improvements in language performance, consistent with findings from previous AI-in-education research [2],[1].

Research Locale

The study was conducted in Cagayan de Oro City, Philippines—a developing urban center where both public and private higher education institutions are gradually integrating AI-assisted language learning platforms into their curricula. The selected institutions included Tagoloan Community College, the University of Science and Technology of Southern Philippines (USTP), and Southern Philippine College (SPC).

These institutions were chosen because they represent a range of academic environments—public and private, technology-oriented and education-focused—allowing a balanced analysis of AI implementation across varied educational contexts. The presence of digital learning tools, particularly AI-based applications such as Duolingo, Grammarly, ChatGPT, and Promova, made these schools ideal settings for assessing the influence of AI on language proficiency.

Research Respondents

The respondents of the study were 407 second-year college students enrolled during the first semester of the academic year 2024–2025. Participants were selected through random sampling based on Slovin's formula, ensuring fair representation across the population.

The students came from three academic programs—Education, Information Technology, and Business Administration—to capture diverse experiences with language learning and technological exposure. Of the total sample, 191 respondents were from public institutions and 216 from private institutions, reflecting the balanced distribution between sectors.
In terms of demographic variables:

- Sex: Both male and female respondents were included to analyze potential differences in language achievement.
- Type of School: Respondents were grouped as coming from public or private institutions.
- Frequency of AI Use: Participants were classified based on how often they used AI tools in their studies (e.g., rarely, occasionally, frequently, or always).

The inclusion of these profiles allowed for the identification of significant differences in achievement levels based on demographic and behavioral characteristics.
Research Instruments

The study utilized the English Language Achievement Test (ELAT) developed by Oted et al. [16] as the primary instrument to measure language achievement. The ELAT is a 40-item standardized

test designed to assess two key components of English proficiency: grammar and reading comprehension.

1. Grammar Component – This section consisted of 20 items evaluating learners' understanding of syntax, sentence construction, verb usage, and overall grammatical accuracy.
2. Reading Comprehension Component – The remaining 20 items measured the learners' ability to interpret written texts, identify main ideas, and make logical inferences.

The ELAT was selected due to its validity and reliability as a measure of language proficiency in English as a Second Language (ESL) contexts. The test had previously demonstrated a Cronbach's alpha coefficient above 0.85, indicating strong internal consistency. This instrument directly addressed the dependent variable of the study—language achievement—by quantifying participants' linguistic competence in measurable terms.

To complement the ELAT, the study also considered data from the Perception on AI Use in Learning Survey [17], specifically focusing on sections relevant to AI's Aid in Language Learning, Effectiveness and Accuracy of AI Tools, and Confidence in AI Use. These indicators served as the basis for correlating AI-related perceptions with actual language performance.

Validation of Instruments

All instruments used in the study were validated by a panel of experts consisting of language educators, educational technologists, and research specialists. The validation ensured that the content was aligned with the study's objectives and that the items were suitable for the respondents' academic level. Pilot testing was also conducted among 30 students who were not part of the final sample to assess clarity, reliability, and estimated completion time. Based on pilot feedback, minor modifications were made to instructions and item phrasing to improve readability and comprehension.

Data Gathering Procedure

The data collection procedure followed a systematic process to ensure reliability and ethical compliance:

1. Approval and Coordination: Permission to conduct the study was obtained from the research offices of the participating institutions. Formal letters were issued to department heads to facilitate coordination with faculty members handling English-related courses.
2. Orientation of Respondents: The researcher provided an overview of the study's objectives, emphasizing confidentiality and voluntary participation. Students were briefed on how to answer the questionnaires and language achievement test.
3. Administration of Instruments: The ELAT and the Perception on AI Use Survey were administered during scheduled class periods under the supervision of the researcher and designated faculty representatives. Each session lasted approximately 45–60 minutes.
4. Retrieval and Verification: Completed questionnaires were immediately collected and checked for completeness. Invalid or incomplete responses were excluded from data processing.
5. Data Encoding and Analysis: Responses were encoded into a statistical software program for processing. Language achievement scores were categorized based on proficiency levels: *Excellent (36–40)*, *Proficient (31–35)*, *Satisfactory (26–30)*, *Developing (20–25)*, and *Needs Improvement (below 20)*.

To ensure objectivity, the scoring process was double-checked, and data were stored in password-protected files accessible only to the researcher.
Ethical Considerations

This study adhered to ethical research principles as outlined by the Commission on Higher Education (CHED) and the institution's Research Ethics Committee. Participants were informed of the study's purpose and were given the right to withdraw at any point without repercussions. Their identities were kept confidential by coding responses numerically instead of using names. All data collected were used solely for academic purposes. Informed consent was obtained from every participant before data collection.

The use of AI tools in the study was strictly limited to academic and analytical functions; no personally identifiable data were processed through AI systems. The study ensured that all applications of AI remained ethical, transparent, and aligned with educational research standards.

Statistical Treatment of Data
The data collected were subjected to both descriptive and inferential statistical analyses:

1. Descriptive Statistics – Frequency counts, percentages, means, and standard deviations were computed to describe respondents' profiles and their performance in grammar and reading comprehension.
2. Inferential Statistics –

- Pearson Product-Moment Correlation Coefficient (r) was used to determine the relationship between students' perceptions of AI and their language achievement.
- Independent Samples t-test was employed to examine significant differences in language achievement based on sex and type of school.
- One-Way ANOVA was used to determine differences in achievement across courses and frequency of AI use.

The level of significance was set at 0.05, meaning that relationships or differences with a p-value less than 0.05 were considered statistically significant. The use of these statistical tools was guided by similar research in educational technology [9],[4], ensuring methodological consistency with established studies on AI in language education.

RESULTS

A total of 407 second-year college students participated in the study. Table 1 summarizes their demographic information.

Table 1 *Profile of the Respondents*

Variable	Category	Frequency	Percentage
Sex	Male	179	44.0 %
	Female	228	56.0 %
Course	Education	168	41.3 %
	Information Technology	119	29.2 %

Variable	Category	Frequency	Percentage
	Business Administration	120	29.5 %
Type of School	Public (USTP & TCC)	191	46.9 %
	Private (SPC)	216	53.1 %
Frequency of AI Use	Rarely	67	16.5 %
	Occasionally	142	34.9 %
	Frequently	135	33.2 %
	Always	63	15.4 %

The table indicates a balanced distribution across sex and institution type, ensuring representativeness for inferential analysis.

Respondents' Perception of AI in Language Learning

Overall, respondents reported a positive perception of AI in aiding language learning (M = 4.21, SD = 0.52 on a 5-point Likert scale). The highest-rated dimension was *Aid in Language Learning* (M = 4.33), followed by *Effectiveness and Accuracy of Tools* (M = 4.17) and *Confidence in AI Use* (M = 4.12).

These findings suggest that students view AI as an effective partner in grammar correction, vocabulary building, and comprehension support—consistent with the assertions of Hartley [3] and Zhang and Lu [4] that adaptive AI systems deliver timely feedback that enhances linguistic competence.

Language Achievement Proficiency Levels

Table 2 presents respondents' performance in the English Language Achievement Test (ELAT) across two domains: grammar and reading comprehension.

Table 2 Performance in the English Language Achievement Test (ELAT)

Domain	Mean Score / 20	SD	Proficiency Level
Grammar	15.8	2.9	*Proficient*
Reading Comprehension	14.6	3.1	*Proficient*
Overall Achievement / 40	30.4	4.8	Satisfactory to Proficient

The composite mean of 30.4 indicates that most students achieved between *Satisfactory* and *Proficient* levels of English proficiency. Learners demonstrated stronger command of grammatical structures than of inferential reading, aligning with prior findings that AI tools such as grammar checkers provide more immediate corrective feedback on structure than on deep comprehension [10].

Relationship Between AI Perception and Language Achievement

The Pearson correlation analysis revealed a moderate positive relationship between respondents' perception of AI and their overall language achievement ($r = 0.47$, $p < 0.01$). When broken down by dimension:

Table 3 *Correlation: AI Perception and Language Achievement*

AI Perception Dimension	r value	p value	Interpretation
Aid in Language Learning	0.52	< 0.01	Significant positive
Effectiveness and Accuracy of Tools	0.45	< 0.01	Significant positive
Confidence in AI Use	0.38	< 0.05	Significant positive

Students who reported higher trust and comfort in using AI scored better on both grammar and reading tasks. These results echo Chen et al. [2], who emphasized that AI-driven personalized feedback enhances the quality of learning and measurable achievement.

Differences in Language Achievement Across Demographics

By Sex

An independent-samples t-test showed no significant difference between male (M = 30.1) and female (M = 30.6) respondents ($t(405) = –0.92$, $p > 0.05$). This suggests that both sexes benefit similarly from AI-assisted learning environments, corroborating Shin (2018), who observed gender-neutral gains from AI feedback systems.

By Course

A one-way ANOVA indicated a significant difference among courses ($F(2, 404) = 4.23$, $p < 0.05$). Post-hoc tests (Tukey HSD) revealed that Education students (M = 31.2) scored higher than IT students (M = 29.4), while Business students (M = 30.3) did not differ significantly from either group. Education majors likely possessed stronger linguistic backgrounds and more consistent exposure to AI-based writing or grammar-teaching applications.

By Type of School

No significant difference was found between public (M = 30.2) and private (M = 30.5) institutions ($t(405) = –0.41$, $p > 0.05$), implying comparable access to AI resources across both sectors.

By Frequency of AI Use

Results of ANOVA indicated a highly significant effect of frequency of AI use on language achievement ($F(3, 403) = 9.76$, $p < 0.01$).

Students who reported *frequent* or *always* using AI tools obtained higher mean scores (M = 32.1 and 33.0, respectively) than those who used AI *rarely* (M = 27.9). This finding supports Huang, Hew, and Fryer [9], who demonstrated that habitual interaction with chatbots and adaptive platforms yields measurable proficiency gains.

Qualitative Insights

Open-ended responses from the semi-structured interviews reinforced the quantitative findings. Students described AI platforms as *"instant tutors"* that provided corrective feedback and allowed repeated practice without judgment. Several respondents highlighted features such as grammar explanation modules and adaptive reading tasks that targeted individual weaknesses. However, a few noted limitations—occasional inaccuracies in AI corrections and over-reliance on translation aids—confirming Chassignol et al. [5] and Song & Song [11], who cautioned that AI systems, while efficient, require human oversight for nuanced linguistic feedback.

Summary of Findings

1. Respondents generally held a positive perception of AI's role in language learning.
2. The average language achievement level was *Satisfactory to Proficient*, with stronger grammar than reading performance.
3. There was a significant positive correlation between favorable AI perceptions and higher language achievement scores.
4. Frequency of AI use significantly influenced achievement, while sex and type of school did not.
5. Students valued AI for instant feedback and accessibility but recognized the need for balanced human guidance.

These findings substantiate the claim that AI contributes meaningfully to learners' language achievement, particularly when usage is regular and purposeful.

DISCUSSION

This study set out to explore the impact of Artificial Intelligence (AI) on college students' language learning. Results showed that students not only performed from satisfactory to proficient in English, but also viewed AI positively as a learning aid. What stands out is the moderate but clear link: students who value and actively use AI tools tend to achieve better results in grammar and reading comprehension.

AI as a Catalyst for Language Achievement

Building on previous research by Hartley [3] and Kessler [1], our findings reinforce the idea that AI can truly support language learners, offering instant feedback and learning experiences tailored to individual needs. With adaptive algorithms, AI detects grammar mistakes, provides helpful corrections, and explains concepts in a way that makes sentence structure more accessible to students. Respondents showed stronger grammar skills than reading comprehension, suggesting that AI is particularly effective in teaching the structural side of language, though less so in helping learners develop advanced comprehension skills.

This pattern echoes the work of Nazari et al. [10], who found that AI-powered writing assistants and grammar tools are highly effective for improving syntax but don't always boost interpretive reading abilities. Shin [7] also noted that while chatbots and automated correction tools can make a real difference in writing and speaking fluency, they don't quite match human instruction when it comes to fostering deep understanding. Ultimately, AI shines brightest as a helpful supplement to human teaching, but isn't a full replacement for it.

Relationship Between Perception and Achievement

A clear relationship exists between positive perceptions of AI and higher language achievement ($r = 0.47$, $p < 0.01$), showing that students' attitudes are crucial for embracing technology in language learning. As Chen, Chen, and Lin [2] explain, when learners trust AI-based tools as reliable and useful, they're more engaged and benefit more over time, improving their proficiency.

Zhang and Lu [4] further note that AI's personalization and adaptability can spark greater motivation and persistence, which indirectly support student success. In fact, our study found that

students who frequently used AI tools outperformed occasional users, highlighting the value of consistent interaction with intelligent language systems.

Demographic Differences

There was no notable difference in language achievement between male and female respondents, indicating that AI tools support learners of both genders equally. This finding echoes Shin [7], who observed gender-neutral advancements in AI-assisted English learning. Similarly, the absence of a significant difference between public and private school students suggests AI resources are now more evenly available across different institutions, helping to close the digital divide in language education.

However, notable differences emerged across academic programs. Education students outperformed those in IT and Business, which could be attributed to the greater emphasis on English proficiency and digital tool use in teacher-training curricula. This is consistent with Huang, Hew, and Fryer [8], who found that language majors tend to gain more from AI-mediated learning due to increased engagement and content relevance.

Frequency of AI Use as a Key Determinant

This study found that people who frequently use AI tend to achieve notably higher proficiency scores, highlighting the benefit of consistent interaction. Regular use allows for continuous and iterative learning: through feedback, correction, and ongoing reinforcement. Wu and Yu [12] also found that chatbot-based education platforms give students immediate feedback and space to practice on their own, leading to better results. In this research, those who used AI always or frequently averaged scores at the Proficient level, showing that steady exposure really makes a difference in learning.

The findings also point to the self-regulated learning that can come with AI use. Learners who turn to AI for help are demonstrating habits like self-monitoring and self-correction, which are key for lasting achievement. Zimmerman [13] argued that being aware of how you learn and responding to feedback matters for academic success. With AI tools at hand, learners can more easily reflect on their work and make improvements in real time.

Qualitative Insights and Contextual Considerations

Interviewees warmly described AI as their “instant tutor,” echoing Roll and Wylie’s [6] concept of AI as “personalized scaffolding.” They valued how accessible AI was and how it offered quick feedback, especially for grammar and vocabulary help. Some, however, observed that certain AI tools sometimes gave answers that were either too basic or didn’t fit the context well, mirroring reservations noted by Chassignol et al. [5] and Song and Song [11] about how dependable and culturally appropriate AI-generated responses can be.

Although most students saw the benefits of using AI, their responses revealed that depending on it too much might stop them from thinking independently. Relying heavily on AI feedback could reduce their chances to self-assess and grow. As a result, teachers have an important role in guiding students so that AI is used for support and practice, rather than as a replacement for genuine learning.

Theoretical Integration

These results show how modern AI technology puts learning theories into action in ways that benefit students. Cognitive Learning Theory and CALL both stress the value of feedback and keeping students motivated. By letting learners interact with realistic, AI-powered environments, these tools help students absorb and use language more effectively. The study backs up Long's Input-Interaction-Output Hypothesis too—students who used AI more often wrote with better grammar.

AI helps at every stage: it provides good models (input), creates opportunities for back-and-forth (interaction), and guides students to improve their work (output). Altogether, this process demonstrates how AI can bridge the gap between just being exposed to language and actually achieving language mastery.

Alignment with Previous Literature

This study's results line up with existing research highlighting AI's positive impact on learning new languages. Wu and Yu [12] showed that AI chatbots increase learners' motivation and skills, Nazari et al. [10] reported notable writing accuracy boosts from AI writing assistants, and Zhang and Lu (2021) found that AI-powered environments enhance reading comprehension. Together, these findings support the idea that AI significantly improves language achievement.

But the study also reflects the caution some researchers advise. Alam [14] and Petrović & Jovanović [15] warn that too much automation could weaken critical thinking and communication. So, while AI is a valuable asset, it should strengthen—not substitute—human teaching.

CONCLUSION

According to the findings, Artificial Intelligence (AI) plays a beneficial role in college students' language learning, especially in grammar and reading comprehension. Students who engage frequently with AI tools for language practice tend to achieve higher proficiency compared to those who use them less.

The study highlights several key points:

1. Most students view AI as a dependable and effective aid for enhancing their language abilities.
2. There is a clear, positive relationship between frequent AI use and improved language skills.
3. Frequent interaction with AI leads to greater proficiency, while factors like gender and school type have minor effects.
4. AI tools yield the best results when incorporated into everyday study routines that prompt participation and personal reflection.

Overall, the research positions AI as a valuable ally in language development, supporting both independent and classroom learning.

Pedagogical Implications

1. Integration in Curriculum Design: Incorporating AI tools into the English curriculum can make learning more personal and engaging for students. Technologies like Grammarly, ChatGPT, and Promova can supplement lessons with interactive grammar practice, essay development, and reading support.
2. Teacher Professional Development: Educators should be given practical training on responsible AI use, focusing on best practices and the boundaries of technology. Guided, teacher-led AI use ensures students benefit without depending solely on automated advice.
3. Balanced Human-AI Interaction: AI is a partner, not a replacement. Teachers should help students approach AI suggestions critically so they can apply feedback thoughtfully instead of accepting it uncritically.
4. Equitable Access to Technology: Extending AI resources to all types of schools can level the playing field. Investing in tech infrastructure and collaborations with EdTech firms is key to making sure every learner has these opportunities.
5. Encouragement of Self-Regulated Learning: By integrating activities like setting learning goals and self-assessment, teachers help students use AI to become more independent and reflective learners.
6. Research and Development: Further research should explore how ongoing AI use shapes language skills over time, using multi-method and long-term studies for deeper understanding.

Recommendations for Future Research

1. Conduct experimental studies using pretest-posttest designs to establish causal relationships between AI use and specific language outcomes.
2. Explore qualitative case studies to understand learners' cognitive and emotional engagement with AI tools.
3. Investigate the role of AI in developing productive language skills such as speaking and writing.
4. Examine the ethical implications and digital literacy requirements of AI integration in language education.
5. Undertake comparative studies between AI-assisted and traditional language instruction to evaluate efficiency and learner satisfaction.

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