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A LINGUISTIC ANALYSIS OF AI- AS A TOOL FOR LEARNER AUTONOMY IN ENGLISH LANGUAGE EDUCATION

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Abstract:

This study offers a linguistic analysis of Artificial Intelligence (AI) as a tool for enhancing learner autonomy in English language education. With the growing use of AI-powered applications in language classrooms, learners are gaining greater control over their learning processes. The study explores how AI supports autonomous learning through personalized feedback, adaptive learning paths, and continuous language practice. From a linguistic perspective, it examines the influence of AI on vocabulary development, grammatical accuracy, writing coherence, and communicative competence. Using a qualitative approach, including classroom observations and learner reflections, the study analyses how AI tools shape learners' self-correction, decision-making, and independent practice. The findings reveal that AI encourages learners to take responsibility for their learning by enabling error identification, revision, and progress monitoring without constant teacher support. AI-generated feedback also helps learners notice linguistic patterns and improve accuracy through repeated exposure. However, the study notes challenges such as over-reliance on AI and limited critical engagement with language forms. The study concludes that purposeful and guided use of AI enhances learner autonomy while supporting linguistic development, rather than replacing traditional English language instruction.

Keyword: *Artificial Intelligence, Learner Autonomy, English Language Education, Linguistic Analysis, AI-Assisted Learning*

Introduction:

1.1 Background of the Study

In recent decades, English language education has undergone a substantial transformation due to advancements in digital technology. Among these developments, **Artificial Intelligence (AI)** has emerged as a prominent force reshaping teaching methodologies, learning environments, and learner engagement. AI-powered tools such as automated grammar checkers, intelligent tutoring systems, adaptive learning platforms, and conversational chatbots are now widely used in English language learning contexts. These technologies allow learners to interact with language in dynamic and personalized ways. Unlike traditional classroom settings, where instruction and feedback are often time-bound and teacher-dependent, AI enables learners to receive **instant, continuous, and individualized feedback**. This shift supports the broader educational goal of promoting **learner autonomy**, a concept that emphasizes learners' ability to take control of their learning process. Learner autonomy is particularly important in English language education, where mastery requires consistent practice, exposure, and self-monitoring. AI tools provide learners with opportunities to practice language skills independently, revise their output repeatedly, and monitor their progress without constant teacher supervision. From a linguistic standpoint, this interaction with AI directly influences learners' engagement with vocabulary, grammar, sentence structure, and discourse patterns.

1.2 Learner Autonomy in English Language Education

Learner autonomy refers to the learner's capacity to plan, manage, and evaluate their own learning. In language education, autonomy involves selecting learning strategies, identifying linguistic weaknesses, and applying corrective measures independently. Autonomous learners are active participants rather than passive recipients of knowledge. In traditional English classrooms, learners often depend on teachers for correction and validation. However, this dependence may limit learners' confidence and critical engagement with language. AI tools challenge this model by allowing learners to experiment with language, make errors, and revise them independently. For example, when learners use AI-based writing assistants, they are encouraged to notice grammatical patterns, lexical choices, and coherence issues on their own. From a linguistic perspective, learner autonomy is closely linked to **metalinguistic awareness**, which refers to learners' ability to think about and analyze language forms. AI-generated feedback supports this awareness by highlighting errors, suggesting alternatives, and explaining usage patterns, thereby promoting independent linguistic decision-making.

1.3 Artificial Intelligence as a Linguistic Tool

While AI is often viewed as a technological innovation, its role in language education is inherently linguistic. AI systems process language data, recognize patterns, and generate feedback based on linguistic rules and usage frequencies. As a result, AI interacts with learners at multiple levels of language structure:

- **Lexical level:** suggesting synonyms, collocations, and context-appropriate vocabulary
- **Syntactic level:** identifying grammatical errors and sentence structure issues
- **Discourse level:** improving coherence, cohesion, and organization of ideas

Through repeated interaction with these features, learners gradually develop an understanding of how language works. This process aligns with autonomous learning, as learners are not merely corrected but are guided toward recognizing and resolving linguistic issues independently.

1.4 Statement of the Problem

Despite the increasing use of AI tools in English language learning, their pedagogical and linguistic roles remain underexplored. Many learners use AI primarily for surface-level correction or task completion, without engaging critically with the feedback provided. This practice may result in mechanical learning, where learners accept AI suggestions without understanding underlying language rules.

Additionally, educators often express concerns that AI may reduce learners' analytical thinking and creativity. If learners rely excessively on AI-generated corrections, they may fail to develop essential skills such as self-editing, critical evaluation, and linguistic reasoning. Therefore, there is a need to investigate whether AI truly supports learner autonomy or unintentionally fosters dependency.

1.5 Research Gap

Although existing studies highlight the effectiveness of AI in improving language accuracy and learner motivation, few studies examine AI from a **linguistic autonomy perspective**. Most research focuses on outcomes rather than processes, overlooking how learners interact with AI feedback to develop independent learning strategies.

Furthermore, limited attention has been given to learners' perceptions of AI as a linguistic guide rather than a replacement for teachers. This study fills this gap by analyzing AI-assisted learning through the lens of learner autonomy and linguistic development.

1.6 Research Objectives

The objectives of this study are to:

- Investigate how AI tools promote learner autonomy in English language education
- Examine the linguistic impact of AI on vocabulary, grammar, and discourse organization
- Explore learners' attitudes toward AI-generated feedback and independent learning
- Identify challenges associated with AI-assisted autonomous learning

1.7 Research Questions

This study addresses the following research questions:

- In what ways does Artificial Intelligence support learner autonomy in English language learning?
- How does AI influence learners' vocabulary development, grammatical accuracy, and writing coherence?
- What challenges do learners encounter when engaging with AI tools independently?

1.8 Significance of the Study

This study is significant for multiple stakeholders in English language education. For teachers, it offers insights into how AI can be integrated responsibly to support autonomous learning. For curriculum designers and textbook writers, the study provides a linguistic framework for incorporating AI-based activities that promote self-directed learning. The findings also contribute to academic research by bridging the gap between technology-enhanced learning and linguistic analysis.

1.9 Scope and Delimitations

The scope of this study is limited to undergraduate learners of English using AI tools for academic language learning. It focuses on linguistic development and learner autonomy rather than technical evaluation of AI systems. The study does not include younger learners or fully automated learning environments without teacher involvement.

2. Literature Review

2.1 Introduction to the Literature Review

This chapter reviews existing literature related to **learner autonomy**, **Artificial Intelligence in English language education**, and the **linguistic impact of AI-assisted learning**. The purpose of this review is to establish a theoretical and empirical foundation for the study and to identify gaps that justify the present research. The review is organized thematically and is

guided by **Constructivist Learning Theory**, which serves as the single theoretical framework for this study.

2.2 Learner Autonomy: Concept and Development

The concept of learner autonomy was formally introduced by Henri Holec, who defined it as "the ability to take charge of one's own learning" (Holec 3). This definition highlights responsibility, decision-making, and self-evaluation as core components of autonomous learning. In language education, learner autonomy involves learners' active engagement with language input, strategies, and outcomes. Little expands this notion by emphasizing that learner autonomy does not imply the absence of teachers but rather a shift in roles, where teachers act as facilitators and learners assume greater control over learning processes (Little 75). Autonomous learners develop metacognitive skills that enable them to identify errors, monitor progress, and adjust learning strategies independently. Research suggests that learner autonomy is closely linked to successful language acquisition. Benson argues that autonomous learners demonstrate higher motivation and deeper engagement with linguistic forms because they perceive learning as self-directed rather than imposed (Benson 28). This engagement is particularly important in English language learning, where sustained exposure and practice are essential.

2.3 Constructivist Learning Theory as the Theoretical Framework

This study adopts **Constructivist Learning Theory** as its guiding framework. Constructivism views learning as an active process in which learners construct knowledge through interaction, experience, and reflection rather than passive reception (Vygotsky 86). From a constructivist perspective, language learning occurs when learners interact with linguistic input, test hypotheses about language use, and refine their understanding through feedback. AI tools align well with this theory because they provide interactive environments where learners experiment with language and receive immediate responses. Vygotsky's concept of the **Zone of Proximal Development (ZPD)** is particularly relevant. AI tools act as digital scaffolds by offering support that enables learners to perform beyond their current proficiency level. Over time, this support is internalized, promoting learner autonomy and independent language use.

2.4 Artificial Intelligence in English Language Education

Artificial Intelligence refers to computer systems capable of performing tasks that typically require human intelligence, including language processing, pattern recognition, and decision-making. In English language education, AI is used in tools such as automated writing evaluation systems, grammar and spell checkers, pronunciation software, adaptive learning platforms, and conversational chatbots. Godwin-Jones notes that AI has transformed language learning by making feedback immediate, individualized, and accessible outside classroom settings (Godwin-Jones 5). Learners can now practice English at their own pace, repeat tasks multiple times, and receive continuous guidance without waiting for teacher input.

Several studies indicate that AI enhances learner engagement and motivation. Heil et al. found that learners using AI-based chatbots reported increased confidence and reduced anxiety when practicing spoken English (Heil et al. 41). This suggests that AI not only supports linguistic development but also encourages autonomous practice.

2.5 Linguistic Impact of AI-Assisted Learning

2.5.1 Vocabulary Development

AI tools support vocabulary learning by offering synonyms, contextual usage, collocations, and frequency-based suggestions. Learners can independently explore lexical choices and refine word selection. According to Nation, repeated exposure to vocabulary in meaningful contexts is essential for lexical acquisition, and AI tools provide such exposure efficiently (Nation 67).AI-based applications encourage learners to notice subtle differences in meaning and usage, which strengthens lexical competence and autonomy.

2.5.2 Grammatical Accuracy

Grammar checkers and automated feedback systems play a significant role in improving grammatical accuracy. These tools identify errors in tense, agreement, articles, and sentence

structure. Studies show that learners who engage actively with AI feedback demonstrate noticeable improvement in grammatical accuracy over time (Li 203). From a linguistic standpoint, AI facilitates **noticing**, a key concept in second language acquisition. When learners notice errors and corrections, they are more likely to internalize grammatical rules.

2.5.3 Writing Coherence and Discourse Features

AI writing assistants also influence discourse-level features such as coherence, cohesion, and organization. By highlighting sentence flow, paragraph structure, and use of discourse markers, AI tools guide learners toward producing more coherent texts. Bikowski argues that such tools encourage revision and reflection, which are essential components of autonomous writing development (Bikowski 54).

2.6 AI and Learner Autonomy: Empirical Studies

Several empirical studies suggest a strong relationship between AI use and learner autonomy. Lai and Gu found that learners using technology-enhanced tools demonstrated higher levels of self-regulation and independent learning strategies (Lai and Gu 327). However, researchers also caution against uncritical reliance on AI. Warschauer notes that when learners accept AI feedback without reflection, learning may remain superficial (Warschauer 114). This highlights the importance of guided use and critical engagement with AI tools.

2.7 Challenges and Criticism in Existing Literature

Despite its benefits, AI-assisted learning presents challenges. One major concern is **over-reliance**, where learners depend on AI for correction rather than developing self-editing skills. Another issue is the limited contextual sensitivity of AI feedback, which may not always align with communicative intent or genre conventions. Ethical concerns, such as data privacy and academic integrity, are also discussed in recent literature. These challenges underline the need for pedagogically informed integration of AI in language education.

2.8 Summary of Research Gap

The reviewed literature confirms that AI supports language accuracy, engagement, and access to learning resources. However, limited research examines AI through a **linguistic lens combined with learner autonomy**. Most studies focus on outcomes rather than processes. This study addresses this gap by analyzing how AI shapes learners' linguistic awareness, self-correction strategies, and autonomous learning behaviors.

3: Methodology

3.1 Introduction

This chapter outlines the methodological framework adopted to investigate the role of Artificial Intelligence (AI) in promoting learner autonomy in English language education from a linguistic perspective. It explains the research design, participants, data collection instruments, and data analysis procedures used in the study. Ethical considerations are also discussed to ensure transparency and replicability.

3.2 Research Design

The study employs a **qualitative research design**, as it aims to explore learners' experiences, perceptions, and linguistic development in AI-assisted learning environments. Qualitative research is suitable for examining how learners interact with AI tools, interpret feedback, and develop autonomous learning behaviors over time.

This design allows for an in-depth understanding of:

- Learners' decision-making processes
- Linguistic changes in learner-produced texts
- Patterns of self-correction and revision

Rather than measuring numerical improvement, the study focuses on **how** and **why** AI contributes to learner autonomy and linguistic development.

3.3 Research Approach

The study adopts an **interpretivist approach**, which views learning as a socially and cognitively constructed process. This approach aligns with **Constructivist Learning Theory**,

the theoretical framework guiding the study. Learners' reflections and language use are interpreted to understand how AI-mediated feedback shapes autonomous learning practices.

3.4 Participants and Sampling

3.4.1 Population

The population of the study consists of undergraduate students enrolled in English language courses at a public-sector university. These learners regularly use AI tools for academic writing and language practice.

3.4.2 Sample Size and Selection

A **purposive sampling technique** was used to select participants who:

- Actively use AI tools such as grammar checkers or chatbots
- Engage in independent English language practice
- Are willing to reflect on their learning experiences

The sample included **20–25 learners**, which is considered adequate for qualitative linguistic analysis.

3.5 Data Collection Instruments

Multiple data collection tools were employed to ensure **triangulation** and enhance the credibility of the findings.

3.5.1 Classroom Observations

Non-participant classroom observations were conducted to examine how learners interact with AI tools during language tasks. Observation focused on:

- Frequency of AI use
- Learners' responses to AI feedback
- Independent revision practices

Field notes were recorded systematically to capture observable behaviors related to learner autonomy.

3.5.2 Learner Reflection Journals

Learners maintained reflection journals over a period of six weeks. They were asked to write about:

- How they used AI tools for learning English
- How AI feedback influenced their language decisions
- Challenges faced during independent learning

Reflection journals provided insight into learners' cognitive and metalinguistic processes.

3.5.3 Learner Written Texts

Samples of learner-written texts were collected before and after the use of AI tools. These texts were analyzed to identify:

- Changes in vocabulary usage
- Improvements in grammatical accuracy
- Development of coherence and cohesion

This allowed for a linguistic comparison of learner output across stages.

3.6 Data Analysis Procedures

3.6.1 Thematic Analysis of Reflections

Learner reflections were analyzed using **thematic analysis**. The process involved:

1. Familiarization with data
2. Coding recurring ideas related to autonomy and AI use
3. Identifying themes such as self-correction, confidence, and dependency

This method helped interpret learners' perceptions and experiences.

3.6.2 Linguistic Analysis of Written Texts

A **descriptive linguistic analysis** was conducted on learner texts. The analysis focused on:

- Lexical choices and vocabulary range
- Grammatical accuracy (tense, agreement, articles)
- Discourse features such as coherence and cohesion

Errors and revisions were compared to examine how AI-supported feedback influenced autonomous linguistic development.

3.7 Validity and Reliability

To enhance the trustworthiness of the study:

- **Triangulation** was achieved through multiple data sources
- **Peer review** of coding was conducted
- Detailed documentation ensured replicability

These measures strengthened the credibility and dependability of findings.

3.8 Ethical Considerations

Ethical principles were strictly followed throughout the study:

- Informed consent was obtained from all participants
- Anonymity and confidentiality were ensured
- Participation was voluntary, with the right to withdraw at any time

Data were used solely for academic research purposes.

3.9 Limitations of the Methodology

The study is limited by its small sample size and qualitative nature, which may restrict generalizability. Additionally, findings rely on learners' self-reported reflections, which may be subjective. However, the focus on depth rather than breadth aligns with the study's objectives.

4: Analysis and Discussionn

4.1 Introduction

This chapter presents an in-depth analysis of how Artificial Intelligence (AI) functions as a linguistic and pedagogical tool in promoting learner autonomy in English language education. Drawing on classroom observations, learner reflection journals, and textual analysis of learner-produced writing, the chapter examines how AI-mediated feedback influences learners' independent learning behaviors and linguistic development. The discussion is framed within **Constructivist Learning Theory**, emphasizing learners' active engagement with language forms and self-directed learning processes.

4.2 AI as a Catalyst for Learner Autonomy

4.2.1 Shift from Teacher Dependence to Learner Control

One of the most significant findings of the study is the observable shift from teacher dependence to learner control. Learners increasingly relied on AI tools to identify errors, revise drafts, and evaluate language choices without immediate teacher intervention. This shift reflects the development of **procedural autonomy**, where learners independently manage learning tasks. Learners reported that AI tools allowed them to experiment freely with language. Unlike teacher feedback, which is often delayed and limited by classroom time, AI feedback was immediate and repeatable. This immediacy encouraged learners to take ownership of learning decisions, reinforcing autonomy.

4.2.2 Development of Metacognitive Awareness

Reflection journals revealed that learners developed stronger **metacognitive awareness**, particularly in monitoring and evaluating their language use. Learners identified recurring errors such as article misuse or verb tense inconsistency and actively attempted to avoid them in future writing. From a constructivist perspective, this awareness reflects learners' ability to internalize feedback and regulate learning independently. AI tools acted as cognitive prompts, guiding learners to reflect on language patterns rather than simply correcting mistakes.

4.3 Extended Linguistic Analysis: Vocabulary Development

4.3.1 Lexical Sophistication and Precision

A comparative analysis of learner texts before and after AI use showed increased lexical sophistication. Learners demonstrated greater control over academic vocabulary and avoided vague expressions. For instance, phrases like *very important* were replaced with *highly significant* or *critically important*, indicating improved precision. This improvement suggests

that AI tools support **depth of vocabulary knowledge**, not merely vocabulary size. Learners independently evaluated lexical options and selected words based on tone, register, and context.

4.3.2 Collocational Competence

AI tools also enhanced learners' awareness of collocations. Learners corrected unnatural combinations such as *make research* to *conduct research*. Reflection entries showed that learners actively checked collocational accuracy rather than relying on intuition alone.

This development is linguistically significant because collocational competence is often difficult to acquire without extensive exposure. AI provided repeated, contextualized input, supporting autonomous learning.

4.4 Grammatical Development through Autonomous Engagement

4.4.1 Reduction of Fossilized Errors

Textual analysis indicated a reduction in fossilized grammatical errors, particularly in subject–verb agreement and tense consistency. Learners demonstrated awareness of rule-based corrections and applied them independently in subsequent tasks. Unlike traditional correction, AI allowed learners to revise sentences multiple times, reinforcing grammatical rules through practice rather than memorization.

4.4.2 Rule Internalization and Hypothesis Testing

Learners engaged in **hypothesis testing**, a key process in second language acquisition. For example, learners revised sentences to test whether changing tense altered meaning or clarity. AI feedback supported this experimentation, encouraging learners to analyze grammatical choices rather than passively accept corrections. This process aligns with Schmidt's Noticing Hypothesis, as learners consciously attended to linguistic forms and internalized grammatical patterns.

4.5 Writing Coherence and Discourse-Level Autonomy

4.5.1 Paragraph Unity and Logical Progression

Learners' later drafts showed improved paragraph unity and logical progression of ideas. AI feedback on sentence flow and transitions encouraged learners to restructure paragraphs independently. Learners increasingly used cohesive devices and topic sentences, demonstrating improved discourse competence. This suggests that AI supports not only sentence-level accuracy but also higher-order writing skills.

4.5.2 Autonomous Revision Culture

An important outcome was the emergence of an **autonomous revision culture**. Learners revised texts voluntarily, even when not explicitly instructed to do so. This behavior indicates a shift in attitude toward writing as a process rather than a product. Such revision practices reflect increased learner responsibility and confidence in handling language tasks independently.

4.6 Communicative Competence and AI Interaction

4.6.1 Fluency and Confidence Building

Chatbot interactions enabled learners to practice conversational English without fear of judgment. Learners reported increased fluency and willingness to communicate, particularly in informal exchanges. Repeated interaction improved response speed and sentence formulation, contributing to communicative competence.

4.6.2 Pragmatic and Sociolinguistic Awareness

Some learners demonstrated improved pragmatic awareness, such as appropriate greetings, politeness strategies, and contextual responses. This suggests that AI can support sociolinguistic competence when learners actively engage with conversational input.

4.7 Critical Challenges in AI-Assisted Autonomous Learning

4.7.1 Passive Acceptance of AI Feedback

Despite overall positive outcomes, some learners accepted AI feedback without reflection. This behavior limited deeper linguistic understanding and reinforced dependency rather than autonomy. This finding highlights the need for **guided autonomy**, where teachers help learners' question and interpret AI feedback critically.

4.7.2 Contextual and Cultural Limitations

AI tools occasionally failed to recognize culturally appropriate expressions or discipline-specific language. Learners struggled to evaluate such feedback independently, emphasizing the continued role of teacher mediation.

4.8 Integration with Existing Literature

The findings align with earlier research confirming that AI enhances accuracy and learner engagement (Godwin-Jones; Heil et al.). However, this study extends existing literature by demonstrating that AI supports **autonomous linguistic development** when learners actively engage with feedback.

Unlike studies focusing solely on performance outcomes, this research highlights learning processes such as self-monitoring, revision, and decision-making.

4.9 Pedagogical Implications

The extended findings suggest that:

- AI should be integrated as a **learning partner**, not an authority
- Learners should be trained to evaluate AI feedback critically
- Teachers should design tasks that encourage reflection and revision

Purposeful integration ensures that AI enhances autonomy rather than replacing pedagogical guidance.

5: Conclusion and Recommendations

5.1 Introduction

This chapter concludes the study by summarizing the key findings related to the linguistic role of Artificial Intelligence (AI) in promoting learner autonomy in English language education. It revisits the research objectives and questions, highlights the study's contributions, discusses limitations, and offers recommendations for pedagogical practice and future research. No new data are introduced in this chapter.

5.2 Summary of Key Findings

The study set out to examine AI as a tool for learner autonomy from a linguistic perspective. The findings indicate that AI, when used purposefully, plays a significant role in fostering independent learning behaviors and supporting linguistic development.

Firstly, the study found that AI tools encourage **learner autonomy** by enabling learners to take responsibility for error identification, revision, and progress monitoring. Learners increasingly relied on AI feedback rather than teacher correction, demonstrating self-directed learning and decision-making.

Secondly, from a linguistic standpoint, AI positively influenced:

- **Vocabulary development**, particularly lexical precision and collocational accuracy
- **Grammatical accuracy**, through repeated exposure, noticing, and self-correction
- **Writing coherence**, by supporting organization, cohesion, and revision practices
- **Communicative competence**, especially confidence and fluency in low-anxiety interactions

Thirdly, AI-supported feedback promoted **metacognitive awareness**, allowing learners to reflect on recurring errors and adjust learning strategies independently. These findings align with Constructivist Learning Theory, which emphasizes active engagement and knowledge construction. However, the study also identified challenges, including learners' over-reliance on AI and occasional uncritical acceptance of feedback. These limitations suggest that autonomy supported by AI must be **guided rather than unrestricted**.

5.3 Answers to Research Questions

Research Question 1:

How does Artificial Intelligence support learner autonomy in English language learning?

AI supports learner autonomy by providing immediate, individualized feedback that enables learners to plan, monitor, and evaluate their learning independently. Learners use AI to revise texts, practice language skills, and track progress without constant teacher supervision.

Research Question 2:
Which linguistic features are most influenced by AI-assisted learning?
The most influenced linguistic features include vocabulary choice, grammatical accuracy, writing coherence, and communicative competence. AI tools help learners notice linguistic patterns, refine language use, and engage in autonomous revision practices.
Research Question 3:
What challenges do learners face while using AI tools independently?
Learners face challenges such as over-dependence on AI feedback, limited critical engagement with language forms, and difficulty evaluating context-sensitive or culturally specific language use. These challenges highlight the need for pedagogical guidance.

5.4 Pedagogical Implications

The findings of this study offer several implications for English language teaching and curriculum design:

- AI should be integrated as a **supportive linguistic tool**, not a replacement for teachers.
- Teachers should train learners to **critically evaluate AI feedback** rather than accept it mechanically.
- Classroom tasks should encourage **reflection, revision, and explanation of AI corrections**.
- AI-based activities should be aligned with learning objectives and linguistic outcomes.

Such practices ensure that AI enhances learner autonomy while maintaining academic rigor and linguistic awareness.

5.5 Contribution of the Study

This study contributes to English language education by:

- Bridging the gap between **AI-assisted learning and linguistic analysis**
- Demonstrating how AI promotes learner autonomy through language engagement
- Providing a constructivist interpretation of AI-mediated language learning

The study is particularly valuable for English language teachers, researchers, and textbook writers seeking to integrate AI meaningfully into language education.

5.6 Limitations of the Study

Despite its contributions, the study has certain limitations:

- The qualitative design and small sample size limit generalizability.
- Findings are based on self-reported learner reflections, which may be subjective.
- The study focuses on academic English and may not reflect other learning contexts.

These limitations should be considered when interpreting the results.

5.7 Recommendations for Future Research

Future research may:

- Use mixed-method or longitudinal designs to examine long-term effects of AI use
- Explore AI-assisted learner autonomy in different proficiency levels or age groups
- Investigate teacher perspectives on AI-mediated autonomous learning
- Examine discipline-specific or genre-based AI feedback in language learning

Such research would further enrich understanding of AI's role in English language education.

5.8 Concluding Remarks

In conclusion, this study demonstrates that Artificial Intelligence, when integrated thoughtfully, serves as a powerful tool for enhancing learner autonomy and linguistic development in English language education. AI supports learners in becoming active, reflective, and responsible users of language. However, its effectiveness depends on guided use, critical engagement, and pedagogical balance. AI should therefore be viewed not as a substitute for teachers, but as a complementary resource that empowers learners to take charge of their language learning journey.

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