

How will AI affect English Language Learning and Writing Skills?

¹Dr.Sajid Zain

²Kashif Khan

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Article Details	Abstract
Received: 24 Feb 2024 Accepted: 20 March 2024 Published: 28 June 2024 ¹Dr. Sajid Zain ²Kashif Khan Copyright @Author Corresponding Author: *Dr. Sajid Khan	Artificial Intelligence (AI) has come full circle in English language learning. Artificial Intelligence (AI) is playing a pivotal role in the English language learning landscape, transitioning from being a niche in the realm of educational technology to becoming a mainstream part of teaching and learning. There are tools, including automated writing evaluation systems, intelligent tutoring platforms, machine translation, speech recognition applications, and most recently large language model (LLM) chatbots, that are now able to give instant feedback, customized practice, and automatic text generation. This paper analyzes the impact of these tools on the learning and acquisition of English as a second language (ESL) and on the learning and acquisition of writing skills in particular. Based on second language acquisition (SLA) theory, research on technology acceptance, and existing literature on computer-assisted language learning, it establishes an AI tool usage– Learner Outcomes relationship model via feedback quality, motivation, learner autonomy, and cognitive engagement. The analysis indicates that while AI can enhance accuracy, fluency, and confidence in learners, it can also provide increased access to individualized support, its effectiveness depends on how the tools are used. Relying on uncritical ideas can undermine your ability to develop ideas and to revise, as well as your integrity in academic assignments. The paper ends by offering practical suggestions to teachers, learners, institutions and policy makers and directions for future empirical research. It appears that AI has taken the place of the teacher's role in SEL. In the field of SEL, AI seems to have replaced the role of the teacher.

Keywords: Artificial Intelligence (AI), English as a Second Language (ESL), English Language Learning, Second Language Acquisition (SLA), AI-Assisted Learning, Writing Skills, Learner Autonomy, Feedback Quality, Student Motivation, Cognitive Engagement, Computer-Assisted Language Learning (CALL).

¹Assistant Professor, Department of English, University of Peshawar, Pakistan.

²MPhil Scholar, Department of English, University of Peshawar, Pakistan.



INTRODUCTON:

International business, science and higher education, digital communication are still in the majority in English speaking. The ability to read and write in English is very closely linked to schooling and employment prospects for millions of students in non-English speaking countries. Writing is considered as one of the most challenging skills in the production of writing. It involves mastery of grammar, lexis, discourse organization, audience awareness and generating and developing ideas, which are frequently not as readily available as they are in conversation.

Writing instruction has been traditionally based on repeated practice and teacher feedback and peer review. These are effective but resource intensive techniques. Limited time with teachers and delayed feedback due to large class sizes limits individualized guidance that learners can receive. AI-powered tools offer the potential to overcome these challenges by providing instant, scalable, and personalized assistance, thereby improving both customer satisfaction and the company's operational efficiency.

With the advent of publicly available generative AI systems, there has been great excitement and anxiety. Backers cite deeper feedback, less stress and increased independence. Critics for fear of plagiarism, superficial learning, reliance on machine produced text and the loss of the skill the tools are supposed to teach. Due to the rapid pace at which technology evolves, teachers must have a clear method for considering the time and place of the use of AI for and against the development of a language.

Thus this paper focuses on a fundamental question: What effect does the use of AI tools have on English language learning and writing skills and what are the conditions for that effect to be positive?

1.1 Research Objectives

This paper aims to:

- 1.To look at the major types of AI tools in ELT.

¹Assistant Professor, Department of English, University of Peshawar, Pakistan.

²MPhil Scholar, Department of English, University of Peshawar, Pakistan.



- 2.To describe the use of these tools, using known theory, to explain why and how they could affect learning.
- 3.To investigate how AI affects the constituent skills of writing.
- 4.To recognize the potential risks, ethical concerns and limitations of the uses of AI.
- 5.To suggest a plan and recommendations on how to integrate effectively.

The purpose of this study was to determine the significance of the research.

The theme is important to many audiences. Teachers must be provided with evidence-based directions for incorporating AI that does not impede learning. It is crucial for learners to know how to use these tools to enhance their own skills, not to avoid them. There is a need to decide how to regulate the use of AI in assessment and the curriculum by institutions and policymakers. A conceptual model which can be empirically tested in different contexts is required.

2. Literature Review

2.1 From Computer-Assisted Language Learning to AI-Enabled Learning

The development of computer-assisted language learning (CALL) has gone through several phases. Warschauer and Healey (1998) outlined the development from behaviorist drill and practice based programmes, to the communicative approach of CALL and finally to the integrative approach of multimedia and the internet. Initial systems provided static content and were unable to process student responses in any advanced manner. AI systems today have a key distinction from their predecessors: they rely on machine learning techniques and natural language processing (NLP) to interpret learner's language, tailor their responses to individual performance, and enable generative models to create new text from open-ended prompts. In her review of technologies supporting foreign language learning, Golonka et al. (2014) reported positive evidence of technologies used in foreign language learning, but it was noted that the effectiveness of the technologies largely relies on design and implementation, which is still applicable to AI.

¹Assistant Professor, Department of English, University of Peshawar, Pakistan.

²MPhil Scholar, Department of English, University of Peshawar, Pakistan.



The school will classify AI tools as follows:The school will categorise AI tools as follows:

English learners employ a variety of types of AI tools, which can be classified into a few general categories, as shown in Table 1.

Table 1. The key categories of AI tools for English language learning.

Idea generation, brainstorming, or concept developmentGeneral creativity, Brainstorming, Concept development, Idea generation Brainstorming, concept development, idea generation, and general creativity tools

Automated writing evaluation (AWE) Detects grammar, spelling, style and cohesion issues; offers suggestions Writing accuracy, editing Grammarly, ProWritingAid, Criterion

Generative AI chatbots Answers questions, provides explanations and feedback when asked, generates text Writing, reading, vocabulary ChatGPT, Claude, Gemini

The use of intelligent tutoring and adaptive platforms: adjusts exercises to learner level and tracks progress Grammar, vocabulary Duolingo, adaptive LMS modules

Speech recognition and pronunciation tools Determines pronunciation and fluency Speaking, listening ELSA Speak, speech-to-text apps

Includes machine translation and paraphrasing tools that translate and rewrite text between languages.Includes machine translation and paraphrasing tools that can translate and rewrite in-sentence text between languages.

Conversational agents and virtual partners Role play using dialogue and simulated dialogue for practice Speaking, interaction, chat-based role play tools

2.3 Theoretical Foundations

There are several theories that can help explain how AI tools might impact language learning.There are a few theories that can help to explain how AI tools can impact language learning.

Input and Output Hypotheses. The input hypothesis that Krashen (1982) proposed states that acquisition takes place when learners are given input at a level just a little higher than their current proficiency level. AI tools can provide extensive

¹Assistant Professor, Department of English, University of Peshawar, Pakistan.

²MPhil Scholar, Department of English, University of Peshawar, Pakistan.

amount of personalized content, like simplified explanations or reading passages of varying levels of difficulty. The output hypothesis by Swain (1985) states that the process of producing language forces the learner to attention gaps in his knowledge. Tasks in which learners receive AI feedback on their writing may reinforce this noticing if they are doing more than just reading the text.

Sociocultural Theory. Vygotsky (1978) stressed the importance of learning by doing and the zone of proximal development (ZPD) which is the difference between what a learner can do independently and what the learner can do with help. AI systems can serve as scaffolding, providing suggestions and feedback as it happens. The important principle is that the scaffolding is gradually removed allowing the learner to become independent.

Feedback Theory. Feedback is one of the most effective influences on achievement when it indicates to the learner what the next steps are, where the learner is going, and how the learner is doing (Hattie and Timperley, 2007). AI offers quick feedback, but the quality of the feedback is essential for its value, and it should be accurate, specific and actionable.

Technology Acceptance Model. Davis (1989) theorized that technology would be adopted by people if they believed it to be useful and easy to use. When it comes to language learning, users of AI tools are more apt to use them when they are useful and convenient, and this has an impact on how often and effectively they will use them.

2.4 Building on prior evidence: technology and writing

Previous studies on the effects of automated writing evaluation have mainly found that immediate feedback promotes accuracy at the surface level of grammar, spelling and mechanics and promotes revision more frequently. Human feedback is less central to findings for higher order aspects like argumentation and organization and originality. While some initial research and materials into using generative AI for learning have emerged, the work of Kasneci et al. (2023) discusses the potential benefits of personalized learning as well as limitations such as inaccuracies, biases, and excessive dependence on the tool. Empirical

¹Assistant Professor, Department of English, University of Peshawar, Pakistan.

²MPhil Scholar, Department of English, University of Peshawar, Pakistan.



evidence about the use of LLMs in language classrooms is still in its infancy, so some conclusions must be regarded as tentative.

2.5 Research Gap

Studies carried out so far tend to focus on only one tool, on a short intervention or on a limited result, like grammatical accuracy. Less integrate theory, multiple mediating mechanisms and the potential of negative effects in a single framework. To fill the gap, this paper suggests an integrated model which considers the impact of AI as part of the learning process and not a standalone technology.

3. Conceptual Framework

3.1 Overview

The four mediating mechanisms between the use of AI tools and English language learning outcomes proposed by the framework are: Feedback quality, Learner motivation and confidence, Learner autonomy, and Cognitive engagement. These effects are modified by a set of moderating factors.

Figure 1 (text form). Conceptual flow of the proposed framework

1. Input: AI tool use – type of tool, frequency of use, purpose of use.
2. The 4 types of mediating mechanisms: (a) Feedback quality and immediacy, (b) Motivation and confidence, (c) Learner autonomy, (d) Cognitive engagement and effort
3. Moderating Factors: learner proficiency, digital literacy, teacher guidance, institutional policy, task design
4. Text Area: Comprehension, Reading Rate, Standardization, Language Skills, Text Structure, Text Clarity, Text Connections, Text Quality, Vocabulary, Critical Thinking, Academic Honesty

3.2 Hypotheses

The framework leads to the following propositions for future testing:

The relationship between AI feedback tools and writing accuracy/revision quality is positive and guided.

There is a positive relationship between use of AI and the motivation of learners, their self-confidence in writing and decreased writing anxiety.

¹Assistant Professor, Department of English, University of Peshawar, Pakistan.

²MPhil Scholar, Department of English, University of Peshawar, Pakistan.



P3; AI can help learners become autonomous when they are trained to critically assess and use suggestions.

The unguided use of Generative AI for replacing text is negatively correlated with cognitive engagement and fostering independent writing skills in P4.

However, the relationship between AI use and learning outcomes is tempered by teacher guidance and by having clear institutional policies. But teacher guidance and clear institutional policy moderate the relationship between AI use and learning outcomes.

4. Methodology

This paper is conceptual and a narrative review. It draws on a mix of theoretical and empirical literature in order to develop an analytical framework, not report new experiments data. Sources were chosen for relevance to AI or technology-integrated language learning, feedback and development of writing. The tables and figure in this paper represent analytical syntheses and are not empirical data from a new data set. It is possible to test the framework through a quasi-experimental study as described in Section 8.

5. Analysis and Discussion

5.2 Effects on Children's Reading Comprehension

Vocabulary and grammar. Spaced repetition and adaptive platforms assist students in practicing vocabulary and grammar in brief, regular sessions that promote retention. AI explanations can be customized for the student, providing examples and clarifications as needed. This enables access to support outside of the classroom, particularly for learners who do not have regular contact with proficient speakers of English.

Reading and listening. Generative tools can simplify or adapt texts, and can summarize to produce questions to assess comprehension, all in keeping with Krashen's (1982) view of comprehensible input. There is a danger of learners reading only simplified output, or on translation, and thus limited exposure to authentic language.

¹Assistant Professor, Department of English, University of Peshawar, Pakistan.

²MPhil Scholar, Department of English, University of Peshawar, Pakistan.



Speaking and pronunciation. Low pressure practice through speech recognition and conversational agents. Students who have a fear of public speaking can practice with a machine. However, existing systems are unable to fully account for pragmatic and cultural elements of interaction, and may err on accented speech. Motivation and anxiety. Learners frequently cite less judgment by the tool in providing feedback than by teacher or peers. This can promote trial and error, and perseverance. Meanwhile, novelty effects can diminish and lasting motivation requires purposeful objectives and human encouragement as well.

5.2 Effects on Writing Skills

Writing is not one skill. Table 2 breaks it down into its parts and summarizes what is likely to happen to each of them due to AI.

Table 2. Potential impacts of AI on aspects of writing (conceptual synthesis)

New opportunities to write	Numerous opportunities to write	Some opportunities to write
	Seldom opportunities to write	When used with guidance: numerous opportunities to write, some opportunities to write, and seldom opportunities to write.
Knows a few grammatical rules; may explain some errors immediately; may take correction but does not process it; is positive about grammar and punctuation.		
Rewritten words and phrases; not invented words; no change in tone; correct word choice and style	Suggestions for word choice and tone (no change in tone); Homogenized, generic phrasing; Misuse of unfamiliar words	Positive
Handover	Expansion of ideas, inclusion of 'transitions' etc.	Reliance upon templates
	Moderately positive	
Idea generation and content	Brainstorming prompts, counterexamples	
	Reduced original thinking; superficial or inaccurate content	Mixed
Revision and self-editing	Repeated drafting and comparison of versions	
	Outsourcing revision rather than learning how to revise	Positive (led by learner), negative (led by tool)
Voice and authorship	Expressing intended meaning	Blurred authorship; loss of personal voice without guidance
	Mixed to negative without guidance	

¹Assistant Professor, Department of English, University of Peshawar, Pakistan.

²MPhil Scholar, Department of English, University of Peshawar, Pakistan.



Seems to be included in the policy and/or assessment design. Opportunities to teach citation and source evaluation. Plagiarism and undisclosed work with AI assistance.

Precise and superficial quality. The most obvious advantage is in the correctness of language. Feedback on grammar, spelling and punctuation is provided immediately so that learners can see and correct errors as they are writing, not days later. Learners can internalise patterns when tools give explanations of why something is wrong. An improvement in the final text may not lead to an improvement in the ability of the learner when the tools are only fixing errors without producing feedback.

Fluency and confidence. The student who is afraid of mistakes tends to write less. AI support can reduce this hurdle and foster increased draft length and more writing practice. More practice is a potential route to fluency, if the learner keeps on creating text on his or her own.

Organization and argumentation. Generative AI can model academic structure, such as thesis statements, topic sentences and transitions. This is helpful to students who are not used to English rhetorical habits. But more complex skills like developing a convincing argument require thinking and thus cannot be delegated without compromising the learning goal.

Brainstorming and problem solving. The limitation of blank page is minimized by brainstorming with AI, though the learner might go along for the ride and not develop reasoning skills if he or she takes the first suggestion. It would seem from Swain (1985) that the productive struggle which is necessary to elicit noticing and development might be lessened if output is provided rather than produced.

Revision. Revision is a fundamental part of writing. When learners choose what to revise and why, AI can help them revise faster and more often. Tool-led revision (where learners take the revision advice given) can enhance the product without changing the process.

5.3 Mediating Mechanisms

¹Assistant Professor, Department of English, University of Peshawar, Pakistan.

²MPhil Scholar, Department of English, University of Peshawar, Pakistan.



Feedback quality. AI feedback is immediate, consistent and available at any time. It is sometimes also not accurate, too general or not in line with the intent of the task. Weaker learners might not have the capacity to evaluate suggestions and evaluate if they are right or wrong, making them particularly vulnerable to errors in AI output.

Motivation and confidence. Feedback that is given right away, without judgment can boost self-efficacy. AI-generated content, however, may not be very confident in the learner's competence, which can lead to problems in settings without assistance, like exams.

Learner autonomy. AI enables learners to learn at their own pace and on their own terms, which facilitates SLL. Autonomy is real only if the learner plans, monitors and evaluates the use of the tools himself or herself, not for the learner.

Cognitive engagement. This is the deciding mechanism. Questions, making patterns, seeking justifications etc. encourage thinking, which leads to more involvement in the activity. Finished text is reduced by tools used to generate it. The same technology can then be used as a scaffold, or as a substitute.

5.4 Differences in modes of use.

Here is a list of the difference between productive and unproductive AI use.

Table 3. The productive/successful versus unproductive/failed use of AI in writing

Avoid Use it to learn and apply knowledge and skills, or to engage in inquiry and research. Use it to substitute for the actual activity.

AI Tools Role of AI Coach, tutor, reviewer Ghostwriter

Who drafts can be used to generate the draft for the Learner to write.

Handling of feedbackLearner assesses, welcomes and/or rejects suggestions with reasons Learner automatically accepts all suggestions

Typical prompts "Explain my errors," "Ask me questions about my argument" "Write my essay on..."

On skills Improves accuracy, awareness and independence Affects independent production, a weaker one

¹Assistant Professor, Department of English, University of Peshawar, Pakistan.
²MPhil Scholar, Department of English, University of Peshawar, Pakistan.

Integrity Use disclosed and aligned with policy Undisclosed; risk of misconduct

5.5: Risks and ethical considerations

Over dependence and loss of skills. Relying on AI tools for writing could lead to a lack of practice in acquiring the skills of writing if they don't use them in other contexts, such as timed exams or real-world scenarios.

Academic integrity. Generative AI is simple to generate fluent text without creating it from the ground up. Detection tools are not infallible and may make mistakes, especially for non-native English authors, making for fairness concerns. Thus, there is greater confidence that policy and assessment design can provide responses than detection alone.

Accuracy and bias. LLMs can generate correct but wrong answers and can be subject to bias in their training data. They tend to prefer "standard" varieties of English and other legitimate varieties and learners' own identities may be marginalised.

Equity of access. A lack of access to the internet, access to devices and premium tools, and cost may contribute to the widening of existing educational inequalities, especially in developing contexts, particularly.

Privacy. Users can provide the data of their persons and/or institutions to commercial entities without any knowledge of how the data is saved or utilized.

Reduced human interaction. Increased focus on interacting with the machine can limit the important teacher Learner and peer-to-peer communication that advances pragmatic competence and critical discussion.

5.6 The Changing Role of the Teacher

AI is not about replacing teachers, it's about transforming the way they work. Teachers move from being the only source of feedback to creating tasks, imparting the critical evaluation of AI's output and the modeling of responsible use, and giving the higher-order feedback on ideas, argument and voice, that tools can't reliably provide. Process may be a focus of assessment, in addition to product, including drafts, reflection logs, and in-class writing.

¹Assistant Professor, Department of English, University of Peshawar, Pakistan.

²MPhil Scholar, Department of English, University of Peshawar, Pakistan.



6. Practical Recommendations

6.1 For Teachers

Explain explicitly how to be literate in AI such as checking suggestions, flagging mistakes, and creating effective prompts.

- Ask students to create a first draft without the help of artificial intelligence.

Have students provide feedback on which AI recommendations they chose to implement or not and why.

- Assign assessments that value the process and in-class performance, rather than the final text.

Use teacher feedback for content, argumentation and voice strategically.

6.2 For Learners

Use AI to get feedback on your writing, but not as a replacement for writing.

Seek explanations or opinions about errors, don't just correct them.

Maintain a folder of personal mistakes and discuss any repetitive patterns.

- Check facts, source and unfamiliar words independently.

Practice often – without AI – to ensure skills are improving.

6.3 For Institutions and Policymakers

Create clear, task-based policies for use of AI that make explicit what is allowed and not allowed.

- Train teachers and ensure access to tools and connectivity.

Assess accuracy, bias and data protection of tools prior to adoption.

Do not rely entirely on software that can detect AI for enforcement.

6.4 For Developers of Educational AI

Design for learning, not convenience – e.g. explanatory feedback modes, progressively diminished hints.

Acknowledge and provide for multiple varieties of English, and make it clear what is and isn't possible.

- Share teacher dashboards with teachers that provide visibility of learner use of the tool.

8. Discussion and Conclusions

¹Assistant Professor, Department of English, University of Peshawar, Pakistan.

²MPhil Scholar, Department of English, University of Peshawar, Pakistan.



This paper is designed in a conceptual fashion and will not be based on new primary data. Its tables and framework are an amalgam of the theory and research that already exists, and should be treated as hypotheses that need to be tested, not as facts. Tools and capabilities mentioned may rapidly change due to the rapid advancements of generative AI. Much of the empirical research that is available is short term, small scale and specific to context, making the results not easily transferable. Lastly, the paper is specific to English as a FO/L and conclusions can vary for other languages and education contexts.

8. Directions for Further Research

A quasi-experimental approach may be used for future studies, where students are randomly assigned to three groups: (a) writing with AI feedback, (b) writing without AI, and (c) a control group that receives traditional instruction. A standard analytic rubric for assessing the quality of the writing, which includes criteria related to content, organization, vocabulary, language use and mechanics, could be used for pre- and post-testing; questionnaires covering aspects of motivation, autonomy and writing anxiety also could be used; interviews, with analysis of the log of the learner's interaction with the AI, also could be used. Mediating variables such as feedback quality, motivation, autonomy and cognitive engagement can be explored using SEM. To determine if short-term gains last when AI support is discontinued, longitudinal studies are required. Further studies are needed on learners of various proficiency levels, different educational and cultural environments, and the impact on learners from under-resourced environments.

9. Conclusion

The way AI is changing the landscape of learning English is by providing instant feedback, custom learning plans and flexible access to assistance. Evidence and theory presented in this study indicates important advantages for accuracy, fluency, revision frequency and learner confidence for writing. But these benefits don't happen overnight. They rely on the extent to which AI acts as a scaffolding

¹Assistant Professor, Department of English, University of Peshawar, Pakistan.

²MPhil Scholar, Department of English, University of Peshawar, Pakistan.



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to stimulate thinking and eventually encourage independence, or if it becomes a replacement for original writing and the extent of the productive effort it requires. The key takeaway is that AI should not be used if learners do not want to, but how they do. Using the technology's strengths while minimizing its dangers, requires teachers to develop AI literacy, mandate learner-led drafting, evaluate process and highlight high-quality human feedback. Institutions need to go hand in hand with innovation and make the policy clear, at the same time consider equity and ethics. The framework proposed here requires further empirical studies, particularly those that are longitudinal and context sensitive, in order to calibrate it and support evidence-based practice for the development of the technology.

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¹Assistant Professor, Department of English, University of Peshawar, Pakistan.

²MPhil Scholar, Department of English, University of Peshawar, Pakistan.



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¹Assistant Professor, Department of English, University of Peshawar, Pakistan.

²MPhil Scholar, Department of English, University of Peshawar, Pakistan.



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