

# AI in Second Language Learning: Leveraging Automated Writing Assistance Tools for Improving Learners' Writing Task Assessment

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## Abstract

The progress of advanced technologies and the high computational capacities of brainy machines are intrinsically linked to higher education, where the advent of artificial intelligence (AI) introduces both new opportunities and challenges in the dominion of teaching and learning. The transformative potential of AI is not limited to peripheral applications; it extends to reshaping the core structure of educational institutions. In this context, the focus of this paper is on how AI can enhance the assessment of writing tasks for learners. Notable examples include ChatGPT, Google Bard, ask ai.com, and you.com, which serve as AI writing assistants aiding individuals during and after the writing process. These AI-powered tools have become indispensable for many writers, offering Natural language generation and completion suggestions and text generation capabilities. This is particularly beneficial for students, and the paper aims to explore learners' utilization of such AI-powered writing tools, providing insights and imagine classrooms where AI writing assistants become invaluable learning partners, guiding students, and igniting creativity.

## Keywords

Artificial Intelligence, L2 writing, Writing tools, Assessment

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## 1. Introduction

Imagine the classroom transformed. No longer just ink on paper, writing has become a dynamic dance with artificial intelligence (AI). This powerful technology is reshaping not just education, but the very essence of language learning and communication. In this study, we explore into the disruptive impact of AI on every aspect of the writing process, from crafting sentences to evaluating, editing, and even perceiving language itself.

The search for artificial intelligence (AI) began in the 1950s, with scientists seeking answers to the question of machine intelligence. In 1950, Alan Turing proposed a groundbreaking solution: the Turing Test. This famous test involves a human judge interacting with two unseen entities, one human and one machine. If the judge cannot reliably distinguish between them based on their responses, the machine is deemed intelligent (Russell & Norvig, 2010).

John McCarthy, a pioneer in the field, further refined the definition of AI in 1956. He saw it as the "basis of the assumption that every aspect of learning or any other feature of intelligence can be described precisely and so realized in a machine or program" (Kerr, 2017). This definition captured the essence of AI's ambition: to replicate human-like intelligence within machines.

However, early approaches to AI often focused solely on cognitive aspects, neglecting the broader political, philosoph-

ical, and psychological implications of this new technology. As Dacre Pool and Qualter point out (2012), a more complete understanding of AI requires looking beyond technical definitions and incorporating these wider perspectives.

Therefore, a comprehensive definition of AI should encompass its computational capabilities, as well as its ability to mimic human-like processes like learning, adapting, synthesizing information, and even self-correcting. By considering these broader aspects, we can achieve a deeper understanding of what truly constitutes artificial intelligence and the complex impact it will have on society.

Recent years have witnessed corrective feedback (CF) becoming rapid and synchronous, either integrated into cloud-based word processor suites or offered as standalone applications or software suites. This immediacy facilitates the production of more precise and refined writing [1–3]. According to Dale and Viethen [4], a pivotal advancement ushered in by AI is the incorporation of sentence and phrase auto-completion and alternative wording suggestion features, signifying a monumental development in writing.

These advancements owe their existence and continual evolution to AI applications and systems that amass extensive datasets and process them through artificial neural networks and machine learning technologies. The cumulative effect has been groundbreaking progress in transforming texts into structured data and extracting meaning from them, employ-

ing AI-driven natural language processing (NLP) and natural language understanding (NLU). Powered by advancements in mobile technology and AI, instant online translators like Google Translate have become ubiquitous across devices and formats. But the most exciting revolution in writing assistance lies in text generation tools. Systems like Google Compose can offer grammatically sound and even human-like word suggestions, improving your writing piece by piece. More advanced options like ChatGPT and Google Bard AI take it a step further, generating complete texts from just a topic or prompt. In the following sections, we will explore these two distinct types of writing assistance systems in detail.

### **1.1 Automated Feedback for Better Writing**

Automated Writing Evaluation (AWE) systems are now commonplace in educational settings, aiding in the teaching of both first and second languages. Writing involves both high-level skills like content organization and stylistic appropriateness, and lower-level ones like grammar and mechanics. For teachers of second languages, providing helpful feedback on these varied aspects can be a particularly demanding task. AWE systems step in here, offering automated guidance on grammar, style, and even content, lightening the load for language educators and empowering students to improve their writing.

### **1.2 Robotic Writing Corrective Feedback (RWCF)**

The world of computer-assisted language learning (CALL) has long embraced Automated Writing Evaluation (AWE) tools like Turnitin or Feedback Fruits. These systems analyze written texts after the fact, providing feedback and suggestions like a post-game analysis. But a fascinating, underexplored realm lies in AWCF tools: those that offer continuous, in-the-moment guidance while you write. Think of it like having a friendly grammar gremlin perched on your shoulder, whispering helpful pointers as you craft your sentences. Grammarly is the poster child of AWCF, but ProWritingAid and Ginger are also gaining traction.

AWCF tools like Grammarly offer a compelling twist on writing feedback for corrections and suggestions in real-time. Grammar, punctuation, and word choice are their playground, making them kings of catching typos and subject-verb blunders. They are at the lower levels, but complex sentence structures and organizational flaws often sail over their heads. Think of them as grammar, not narrative architects. Another advantage of AWCF tools is Accessibility. Unlike their web-bound AWE cousins, they play nice with others. Grammarly, for example, works as a standalone app, snuggles into Google Docs and Word, and even has a browser extension for on-the-go editing. Global popularity does not always translate to proven impact. Despite Grammarly's omnipresence, its true value in the advanced AI realm of writing assistance needs further research.

### **1.3 Artificial Intelligence- Writing Assistance Tools English Language Classroom**

AI-powered writing tools offer exciting possibilities, but in the classroom, they require careful integration. Use them strategically, aligning them with specific goals and existing practices. Do not let them overshadow the core purpose of writing: clear communication. Keep students engaged with the human aspect of crafting ideas, using AI as a collaborative partner, not a replacement.

Advancements in language models have unlocked a new frontier: intelligent text generation. Tools like ChatGPT and Google Bard AI represent a giant leap, like the invention of the word processor. They generate grammatically correct, even human-like text from minimal prompts, pushing the boundaries of what AI can do. This trend is evident in recent updates from major players like Google and Microsoft, incorporating AI-powered suggestions and text creation alongside traditional grammar checks. In today's fast-paced writing world, auto-completion's not just convenient – it is crucial. So, it is no surprise that Grammarly, known for its grammar expertise, has upped its ante with powerful predictive text features. Just as Dale (63) predicted.

Remember when writing assistance meant suggesting simple words and phrases? ChatGPT models have shattered that barrier, generating lengthy, coherent texts across diverse genres, often indistinguishable from human writing. While Dale (2016) might have envisioned text generation as a 'short leash' for writers, ChatGPT models have ripped the leash off and are redefining the game. Godwin-Jones (2023) proved that ChatGPT-powered tools can weave "dreadfully convincing" outputs, spanning genres and lengths with minimal training (Eaton et al., 2023). This multilingual maestro can even craft sonnets in Italian, demonstrating its creative prowess. But ChatGPT's ambitions go beyond mere assistance. Dale and Viethen (2023) highlight its ability to code, write poetry, translate, summarize, even correct grammar. The ChatGPT is helping writers write. This blurring of lines between assistance and authorship raises compelling questions about the future of writing. Will tools like ChatGPT become our digital scribes, leaving us mere editors in our own narratives? Or will they empower us to push creative boundaries, collaborating with AI to weave richer, more complex tapestries of text?

## **2. Method**

### **2.1 The Sample**

Writing is an important skill of English language learning. Writing and speaking skills come under the production skill where students are giving less interest in this skill. However, the difficulty in writing content and organizing ideas properly. In advent of technology students can improve their writing skill and evaluate their content by themselves with the help of AI tools like Grammarly, ChatGPT, Google Bard. This study focuses on using AI tools for improving and developing students writing skill in the General English classroom. The textbook being used by the teachers and students does not con-

sist of any retention activities. Based on the study and survey conducted, it is understood that there is some improvement in their content, error free in grammar and structure of the sentences.

This study was carried out in St. Joseph's College, Trichy, Tamil Nadu, India. This is an arts and science college where English is offered as a mandatory course in the first four semesters of a six-semester undergraduate degree programme. The course focuses on four basic language skills namely listening, speaking, reading, and writing (LSRW). For this research, 20 students of 2nd year BA English, programme were used as subjects.

## **2.2 Intervention Process**

The Experiment was conducted during the regular class hours. 2 weeks were used (35 minutes each). During the experiment, students were administered with one question, one before the students were given feedback from Grammarly, ChatGPT and Google Bard AI. on writing the topic and to identify the mistakes in grammar, sentence structure and content. and the other after with the help of AI tools which measure the impact of the improving and evaluating their mistakes by themselves and found the improvement in writing skill.

## **2.3 In this study, data was collected in the following way**

- The disruptive effects of AI on writing processes are examined, encompassing production, instruction, acquisition, assessment, and revision. This shift transcends traditional grammar and spell-check functionalities, evolving into comprehensive assistance for identifying writing issues and furnishing suggestions to enhance overall writing quality.
- Students were given a question to writing on the topic which is going to identify their writing skill for the study.
- Following introducing the AI tools and ask them to use for their Automate correction of their grammar and sentence structure.
- Grammarly, Chat GPT, Google Bard AI tools using for improving students writing skill. Authoring tools, exemplified by automated writing evaluation (AWE) and automated essay scoring, originally devised to aid writing instructors in evaluating student assignments, have undergone a paradigm shift with the integration of AI.

## **3. Data Analysis and Result**

### **3.1 Student-1 writing sample original**

In the world without technology the people will interact with one another. they will read lots of books. spend time with family and friends. childrens will not waste their time with mobile phone. they will go out and play with friends so they will easily connect with society. their physical and mental health will not affect. our daily physical activities will increase without technology because if there is technology will do our daily works easily without any hardwork. there will be peace

in society. we will not get addict to gadgets. but technology is needed because using that we can pass the information to one another. many new ideas we can create using developed technology.

### **3.2 Improved: Chat GPT AI**

In a world without technology, people would interact with one another more frequently. They would spend their time reading numerous books and engaging with family and friends. Children would refrain from wasting their time on mobile phones, opting instead to go outside and play with their friends, fostering easy connections with society. Both physical and mental health would likely see positive effects due to increased physical activities, as daily tasks would require more manual effort without the convenience of technology. The absence of technology might contribute to a more peaceful society, as individuals would not become addicted to gadgets.

### **3.3 Google Bard AI**

In a world without technology, people would likely interact face-to-face more often. They would have more time to read, spend with family and friends, and children would not waste their time with mobile phones. Instead, they would play outside with friends, fostering connection and community. This could positively impact physical and mental health, as daily physical activity would likely increase without technology doing all the work. While peace and reduced addiction are potential benefits, it is important to acknowledge that technology also plays a crucial role in communication and innovation. New ideas are often born from the collaborative power of technology, allowing us to share information and build upon each other's work.

### **3.4 Specific errors and improvements**

Sentence fragments: Changed several sentence fragments (e.g., "they will read lots of books") into complete sentences.  
Verb tense inconsistency: Corrected inconsistent verb tenses (e.g., "childrens will" changed to "children would").  
Word choice: Replaced informal language (e.g., "childrens" with "children") and non-standard forms (e.g., "addict to\*\*" with "reduced addiction").  
Clarity: Added transitional phrases and conjunctions to improve sentence flow and clarity.  
Balanced perspective: Acknowledged the positive and negative aspects of a world without technology.

### **3.5 Student-2 writing sample original**

I am having a mobile and typing this through my mobile phone alone. In this situation, a world without technology is not at all possible as we all think, the world without technology can be peaceful but still i won't be easy for us to survive without technology from the "Fan" of our room to the interaction between relatives and friends through "Mobile", everything comes under technology. We cannot be roaming around , hearing songs on our wired or any other "Earphones" , we

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cannot be working in ths laptops instead we will be seen in the fields. Particularly now a days we are not even accepting the fact that we don't have an "Air cooler" at home but how could we even survive without fan for a single day? And through technology we can access the world " A whold world is in our hands" isn't it crazy that we can be found where we are, where we go, everything is possible through technology. Thus, it is impossible to think about a world without technology.

### 3.6 Google Bard AI

Errors: Punctuation: Missing commas and periods, incorrect quotation marks.

Grammar: Run-on sentences, subject-verb agreement issues, typos ("ths" should be "the").

Clarity: Repetition, lack of transition words, informal language ("crazy").

Flow: Jumping between different points without clear connection.

### 3.7 Improved

While typing this on my mobile phone, it is hard to imagine a world entirely devoid of technology. Although a technology-free world might be peaceful, surviving such a drastic shift would not be easy. From relying on fans for comfort to connecting with loved ones through our mobiles, technology permeates every aspect of our lives. No more leisurely strolls with music playing through earphones, replaced by days spent working in fields. We have become accustomed to conveniences like air coolers, even struggling to endure a single day without a simple fan. But technology grants us more than just comfort. It offers access to the world at our fingertips. We can be located, tracked, and connected through a vast network, a reality that would be unthinkable without technology. Therefore, while we might fantasize about a simpler life, completely detaching from technology is impractical and perhaps undesirable.

**Improvements:** Added commas, periods, and corrected quotation marks.

Corrected grammar and typos.

Clarified ideas and avoided repetition.

Used transition words to improve flow.

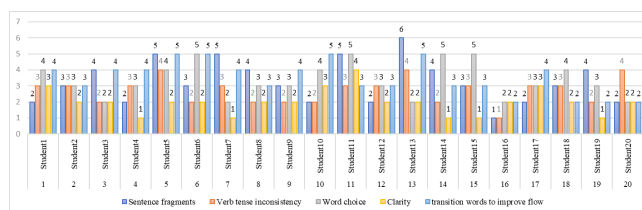
Balanced the argument by acknowledging both limitations and benefits of technology.

### 3.8 ChatGPT

In the current scenario, I am utilizing my mobile phone to type this message. In this context, the notion of a world without technology appears impractical. While the idea of a technology-free world might evoke thoughts of peace, survival without technology presents significant challenges. Virtually every aspect of our lives, from the fan in our rooms to communication through mobile devices with relatives and friends, is intertwined with technology. The absence of technology would mean foregoing the convenience of mobile phones, and

S. No	Students	Sentence fragments	Verb tense inconsistency	Word choice	Clarity	Transition words to improve flow
1	Student1	2	3	4	3	4
2	Student2	3	3	3	2	3
3	Student3	4	2	2	2	4
4	Student4	2	3	3	1	4
5	Student5	5	4	4	2	5
6	Student6	3	2	5	2	5
7	Student7	5	3	2	1	4
8	Student8	4	2	3	2	3
9	Student9	3	2	3	2	4
10	Student10	2	2	4	3	5
11	Student11	5	3	5	4	3
12	Student12	2	3	3	2	3
13	Student13	6	4	2	2	5
14	Student14	4	2	5	1	3
15	Student15	3	3	5	1	3
16	Student16	1	1	2	2	2
17	Student17	2	3	3	3	4
18	Student18	3	3	4	2	2
19	Student19	4	2	3	1	2
20	Student20	2	4	2	2	2

**Table 1.** AI in Second Language Learning: Leveraging Automated Writing Assistance Tools for Improving Learners' Writing Task Assessment



**Figure 1.** AI in Second Language Learning: Leveraging Automated Writing Assistance Tools for Improving Learners' Writing Task Assessment

activities such as listening to music through wired or wireless earphones would become obsolete. Instead of working on laptops, individuals would likely find themselves engaged in manual labor in fields. In the present day, it is inconceivable for many to imagine living without the comfort of an air cooler, let alone a fan

Technology plays a pivotal role in providing access to the world; it allows us to have a vast amount of information at our fingertips. The ability to track our location, activities, and interactions underscores the impact of technology on our daily lives. In essence, the idea of a world without technology seems implausible given the integral role it plays in our existence. The figure 1 appears with different colored lines and text are based on the correction. The content is related to AI in second language learning and the assessment of learners' writing tasks. The chart includes student numbers and various writing assessment criteria such as sentence fragments, verb tense inconsistency, word choice, and clarity.

## 4. Challenges and Issues

As intelligent text generators like ChatGPT and Bard AI become more accessible, their presence in classrooms will inevitably spark a debate. Eaton et al. [5] warn that the widespread use of these tools could threaten the very essence



of education: authenticity, creativity, and proper attribution. When humans and machines collaborate on a text, authorship becomes murky, leaving educators with the daunting task of assessing such work fairly and consistently. To navigate this new landscape, writing teachers must develop tasks that seamlessly blend AI assistance with genuine student effort, like how they integrated machine translation tools in the past.

## 5. Conclusion

Specified the advancements in automated writing assistance, it is crucial for L2 learners and writing instructors to be well-informed about the capabilities of artificial intelligence systems in providing writing support. The widespread attention surrounding the integration of artificial intelligence into writing assistance tools suggests that students are likely to utilize text generators and other emerging writing tools, irrespective of their effectiveness or ethical considerations. Recognizing this likelihood, educators and researchers bear the responsibility of devising ways to guide students in the appropriate use of these tools and seamlessly integrating them into instructional practices whenever feasible. The advantages of instructing L2 learners on the optimal utilization of AI writing tools extend beyond their academic years, positioning them to leverage these tools for enhancing their texts in future professional endeavors. Proficiency in using such technologies has evolved into a crucial component of digital literacy in both educational and professional domains. Researchers urge developers to prioritize features like personalized feedback, scaffolding for struggling learners, and support for diverse writing styles in their educational AI tools. By incorporating features that enhance utility for both teachers and students, these tools can be further optimized. A significant enhancement would involve introducing greater flexibility in usage.

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