THE EFFECTS OF DIGITAL AUTHORING TOOLS ON UNIVERSITY STUDENTS' WRITING: A CASE STUDY OF UNDERGRADUATE STUDENTS

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Abstract: Technology has undoubtedly imposed itself as a crucial tool in developing linguistic skills to the extent that many educational institutions worldwide have integrated it into their teaching methods. In the context of EFL (English as a Foreign Language) writing, the introduction of writing-assisted tools, particularly ChatGPT, has raised questions about their impact on students' writing abilities. This study aims to examine the effects of using electronic writing-assisted tools on EFL students' writing, focusing on five key areas: vocabulary, grammar, coherence, cohesion, and idea generation. To guide the research, a quasi-experiment was conducted with 52 EFL undergraduate students at the University of Algiers 2 in Algeria. The study found that students frequently relied on ChatGPT and Google to generate ideas and improve vocabulary. However, no significant improvements were observed in these areas, nor in grammar, coherence, or cohesion. Additionally, the participants reported that teacher feedback was more valuable than automated feedback due to its perceived accuracy and quality. Thus, the findings suggest that while students use AI tools to generate written content, they do not fully utilize them to foster deep learning, improve writing competence in key areas, or develop independent writing skills. The study highlights the need for educators to develop strategies that help students better utilize technology to enhance their writing skills and produce high-quality original work.

Keywords: Artificial intelligence (AI), automated feedback, authoring tools, automated writing evaluation (AWE), ChatGPT

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1. Introduction

Two years ago, an innovative writing tool, ChatGPT, was introduced, significantly transforming the educational landscape, particularly in writing. What was once a tedious task for students has become remarkably effortless, thanks to technology that can generate extensive and varied texts at ease. These authoring tools have evolved beyond merely correcting mistakes; they now produce entire written works, raising important questions about the future role of human writers.

As a university teacher and researcher, I have witnessed a dramatic shift in students' writing. Error-free written productions, once rare, have become the norm, in contrast to the struggles I once faced with my students' frequent grammatical and syntactical errors. This new reality prompts an important dilemma: should teachers be pleased that the burden of correcting errors has lessened, or should they be concerned about students' increasing reliance on technology, potentially at the cost of genuine learning and skill development?

The use of artificial intelligence (AI) in writing is a relatively recent phenomenon, and its effects on the learning process are still not fully understood. Research is needed to evaluate how digital writing tools impact students' abilities and to identify how these tools are used in practice. The goal is to guide students toward leveraging technology for learning rather than becoming dependent on it as a substitute for the writing process.

Although numerous scholarly publications highlight the positive effects of technology on various aspects of writing, including creativity (William & Beam, 2018; Alkhaladi, 2023; Palmero & Wilson, 2020), there is a growing concern that over-reliance on these tools may lead to a decline in students' fundamental writing skills (Omar, Miah & Belmasrour, 2014; Boyle, 1998; Ismael, Saeed, Brahim & Fatah, 2022). Within this area of research, the current study was set up to explore the types of digital tools university students use for their writing assignments and assess the impact these tools have on their writing abilities. The study was guided by the following research questions:

1. How do students use the digital writing-assistance tools?
2. How do students perceive automated feedback?
3. Do students benefit from the AI tools to improve their writing skills?

The paper will next provide the literature review, followed by the research methodology, findings, and discussion of findings.

2. Literature Review

2.1 AI Support for Writing

The potential of artificial intelligence (AI) in writing instruction is widely acknowledged, but the challenge now lies in effectively integrating it into curricula to support student learning. Alharabi (2023) asserts that AI is "an inescapable reality that language educators must accept and integrate" into the classroom to enhance learning. Despite its growing presence, research on the specific impacts of AI, particularly automated writing evaluation (AWE) tools like Grammarly and text generation systems like ChatGPT, remains limited. William and Beam (2018) synthesized 15 years of research on information and communication technologies (ICT) and their influence on writing, finding that technology consistently supports writing development at all levels, helping students improve both as writers and learners. Similarly, Sue, Lin, and Lai (2023) highlighted the potential of AI-mediated tools like ChatGPT to assist students in overcoming linguistic challenges and scaffolding their argumentative essays. They emphasized, however, the importance of training students to use such tools ethically and responsibly. Alkhaladi (2023) investigated the impact of AI on creativity and found that the use of technological tools had a positive role in

improving students' writing performance, lexical abilities, and imagination. Alzahrani and Alotaibi (2024) also found improvements in writing coherence, cohesion, lexical resource, and grammar in high school students who used ChatGPT over an eight-week period, advocating for its integration into EFL curricula.

In the same vein, Mahapatra (2024) explored ChatGPT's role as a feedback tool in ESL writing classes, revealing positive effects on students' writing skills and perceptions of the tool's practicality, particularly in large classrooms. Steiss et al. (2024) examined whether ChatGPT and human feedback differed in quality and found that human evaluators provided higher quality feedback than ChatGPT but the researchers contend that given the ease of generating feedback through ChatGPT and its overall quality, generative AI may still be useful, particularly in formative early drafts or when a human evaluator is not available. Similarly, Palmero and Wilson' (2020)s research on AWE systems demonstrated improvements in the quality of students' first drafts, while Karyuatry, Rizogan and Darayani (2018) concluded that tools like Grammarly effectively reduce errors and enhance writing quality.

2.2 The Pitfalls of AI Tools

Despite the advantages of AI-based authoring tools, some researchers view their use, particularly ChatGPT, as a form of cheating that threatens the development of authentic writing skills. Huang and Wilson (2021) investigated long-term improvements in writing following the use of AWE systems and found no lasting enhancement in writing ability or independent performance. Similarly, Ranali (2021) concluded that AWE tools are often used merely for proofreading, rather than for learning from feedback to improve writing skills. Warshauer (2007) also warned against AI replacing human feedback, emphasizing that teachers must remain involved in the process, ensuring students engage meaningfully with AI-generated feedback. Omar, Miah and Belmasrour (2014) support this concern, arguing that easy access to AI tools can encourage superficial thinking, undermining critical engagement with writing. Relying on spell checkers, for example, may lead students to neglect their spelling skills. Boyle (1998) even claims that technology diminishes students' cognitive abilities by taking away much of the learning process.

In the same vein, Ismael, Saeed, Brahim and Fatah (2022) contend that increased reliance on technology for writing tasks results in the deterioration of students' writing abilities and critical thinking. Dale and Viethen (2021) raise the issue of plagiarism, noting that AI has shifted from being an editing tool to becoming an author, complicating issues of academic integrity. Eaton, Mindzak and Morrison (2021) further argue that AI-generated content is difficult to detect using traditional plagiarism software, as it often produces unique, original-looking text. Yan (2023) argues that plagiarism should be reconceptualized in this new era of ChatGPT and regulatory policies should be developed to guide students' proper use of the tool. Alharabi (2023) adds another point to this challenge, highlighting the gap between students' use of AI tools and teachers' awareness of them, which can lead to educators unknowingly passing failing students who have cheated through using these technologies. These concerns underscore the need for educators to guide students in using AI tools ethically and responsibly, ensuring that technology enhances rather than hinders their learning.

2.3 Effective Use of AI in Writing

The integration of AI into writing instruction is still in its early stages, and its full impact on learning outcomes remains to be determined. However, researchers have begun to make recommendations for the effective use of AI tools in writing classes. Two main lines of inquiry have emerged: understanding teachers' and students' perceptions of AI and

identifying the conditions under which AI tools are most beneficial for learning. The first type of research emphasizes the importance of raising teachers' awareness of AI's potential in education (Ding et al., 2019; Huang et al., 2021; Arnold & Ducate, 2015; Khan, 2016; Makinina & Carra- Salsberg, 2025; Chelghoum & Chelghoum, 2025). Studies have shown that many teachers are not yet prepared to integrate AI into their instruction, which can hinder its effectiveness. It is believed that acknowledging students' engagement with generative AI in daily academic writing practices is essential (Stöhr, Ou & Malmström, 2024). Sumakul, Hamied & Sukyadi (2022) highlight the necessity of equipping teachers with knowledge about AI applications to ensure successful integration. Pheng, Hashim and Sulaiman (2021) add that AI not only assists teachers but also increases student engagement, a crucial factor in successful learning outcomes. Sumakul et al. (ibid) suggest that teachers be creative with AI and make informed decisions about which applications to incorporate into their classrooms to maximize student motivation.

The second type of research focuses on the conditions that optimize the use of AI-based applications in writing classes. In a meta-analysis study, Little, Clark, Tani and Connor (2018) found an educationally relevant and impactful effect of education technology on writing outcomes but advocated more research to determine the exact mechanisms through which technology supports the acquisition of writing skills. Nunes, Cordeiro, Limpo, and Castro (2022) reviewed eight studies on AWE tools and found that the most successful implementations occurred when these tools were integrated into broader instructional programs rather than used in isolation. These researchers also found that ample writing practice, combined with both teacher and AI feedback, is essential for maximizing the benefits of AI in writing instruction. Bhat (2023) considered varying approaches to technology integration and their success, concluding that the good opportunities and the successful integration of technology depend on the approach of the integration. He contends that careful planning, continuous professional development, and a deep understanding of pedagogical best practices are all important to technology integration. He also claims that "educators, policymakers, and institutions should collaborate to design comprehensive strategies that align technology with educational objectives and address the diverse needs of learners".

3. Methodology

This study employed a mixed-methods design to explore the impact of AI tools on writing skills among undergraduate EFL students.

3.1 Context

The study was carried out in the Department of English at the University of Abulkacem Saadallah, Algires 2. Four classes of third-year undergraduate English students were involved in this quasi-experimental research. Two classes were studying the subject of sociolinguistics (a fundamental Unit) and two others were classes of Cognitive Psychology (A Discovery Unit).

3.2 Participants

The study initially involved 200 undergraduate students. 100 participants were following the course of Cognitive Psychology and 100 others were depicted from the classes of Sociolinguistics course. The researcher was the teacher in charge of the two disciplines. By the end of the experiment, the successive paragraphs of 52 students were retained and 41 questionnaires were collected due to their fulfilment of the experiment requirements.

The participants were required to write paragraphs on topics they studied in class as follows: The first time, they were asked to write a first draft without using AI tools (but

without taking their phones away from them); the second time (right after completing the first draft), the participants were asked to write a second draft with digital assistance, and the third time (after a two-week delay) they were asked to write on the same topic in class without any AI assistance. The participants also filled in an electronic questionnaire after writing the second draft.

3.3 Procedures

First, students' written paragraphs before and after using AI were collected, compared and analysed.

The students wrote to one of these two prompts:

1. Every day, people have to make decisions in various situations in life. Sometimes, the decisions are right and sometimes they are wrong. What are the effective ways to make sound decisions (This topic is in the lecture on 'Decision Making' in the course of Cognitive Psychology)
2. There is a debate on whether non-native speakers of English should use standard English or local English in communication. Give arguments to support the different views. (This topic is in the lecture on 'World Englishes' in the course of Sociolinguistics)

The participants were required to write a first draft without using any technological tools, and then a second draft with the help of AI tools to improve their writing. The two drafts were written and sent to the researcher via Google Form on the same day. Two weeks later, the students wrote on the same topics in class but with making sure that no technological tool was at hand. After collecting the three paragraphs of each student, they were scored and analyzed to consider improvement in the following writing aspects: vocabulary, grammar, coherence, cohesion and ideas. The SPSS version 27 was used to run a t-test for the significant difference.

Right after writing the second draft, the students were sent an electronic 10-item questionnaire via Google Form on the same day. The purpose was to evaluate students' use of electronic writing systems in completing the writing task mainly in what concerns the type of AI they used, the areas they needed to improve, the way they used AI, and their perceptions of automated feedback in contrast with teacher feedback. The use of Google Form for the questionnaire is extremely practical and reliable due to its automatic data processing and chart generation.

4. Results

In this section, both students' scores in writing and their responses to the questionnaire are presented.

4.1 Results of T-test

The mean scores of the three writing tasks were run and compared by SPSS (Version 27).

Table 1:

Descriptive Statistics and Paired Samples t-Tests

Pair	Time Point	M	SD	SE Mean	Mean Difference	SD Diff	SE Diff	p
1	Time 1	12.33	3.25	0.45				
	Time 2	18.02	2.03	0.28	-5.69	3.03	0.42	< .001
2	Time 1	12.33	3.25	0.45				
	Time 3	9.31	2.77	0.38	3.02	3.60	0.50	< .001

*M = Mean; *SD* = Standard Deviation; *SE* = Standard Error.

In sum, the results indicate that the highest scores are obtained when students are required to use technology (Time 2). However, in Time 3, where no technology was allowed, the scores were the lowest (as compared to scores obtained in Time 1 and Time 2). There was a significant regression in scores from Time 1 to Time 3 and the difference is even more important between scores obtained in Time 2 and Time 3.

4.2. Comparison of scores in five writing skills in the three successive writing tests

To examine differences across time points (T1, T2, T3) for each linguistic dimension, a series of independent samples t-tests were conducted. The results are summarized in Table 2.

Table2:

Independent Samples t-Test Results for Linguistic Dimensions Across Time Points

Comparison	t(102)	P	Interpretation
Voc T1 vs. T2	-12.71	< .001	Significant difference; T2 > T1
Voc T2 vs. T3	17.22	< .001	Significant difference; T2 > T3
Voc T1 vs. T3	3.23	.002	Significant difference; T1 > T3
Gram T1 vs. T2	-13.50	< .001	Significant difference; T2 > T1
Gram T2 vs. T3	18.12	< .001	Significant difference; T2 > T3
Gram T1 vs. T3	3.56	< .001	Significant difference; T1 > T3
Cohr T1 vs. T2	-1.20	.235	Not significant
Cohr T2 vs. T3	16.81	< .001	Significant difference; T2 > T3
Cohr T1 vs. T3	2.11	.038	Significant difference; T1 > T3
Cohs T1 vs. T2	-11.96	< .001	Significant difference; T2 > T1
Cohs T2 vs. T3	16.84	< .001	Significant difference; T2 > T3
Cohs T1 vs. T3	4.47	< .001	Significant difference; T1 > T3
Ideas T1 vs. T2	-3.34	.001	Significant difference; T2 > T1
Ideas T2 vs. T3	8.85	< .001	Significant difference; T2 > T3
Ideas T1 vs. T3	5.18	< .001	Significant difference; T1 > T3

**Gram=grammar, Voc=vocabulary, Cohr=coherence, cohs= cohesion
T1=Time 1, T2=Time 2, T3=Time 3

Overall, results showed significant improvements from T1 to T2 in most dimensions, particularly for Vocabulary (t (102) = -12.71, p < .001) and Grammar (t (102) = -13.50, p < .001). A subsequent significant decline was observed from T2 to T3 across all measures, e.g., Vocabulary (t (102) = 17.22, p < .001). However, no significant difference was found

between Coherence T1 and T2 (t (102) = -1.20, p = .235), suggesting stability in that aspect during this period.

4.2 Results of the Questionnaire

Technological Tool	Frequency (n)	Percentage (%)
Google (or other search engine)	15	36.6%
Grammarly (or something alike)	13	31.7%
Chat GPT	9	22.0%
Quillbot	1	2.4%
Bard	1	2.4%
Perplexity	1	2.4%
Word Reference	1	2.4%
Total	**41**	**100%**

Observation: The most used tool was **Google (36.6%)**, followed by **Grammarly (31.7%)** and **ChatGPT (22%)**

Reason for Using the Tool	Frequency (n)	Percentage (%)
To get ideas	25	61.0%
To find words	11	26.8%
To write whole sentences	1	2.4%
To confirm that I am writing correctly	1	2.4%
To find suitable words other than the ones I used in the first draft and for good punctuation	1	2.4%
to reformulate it	1	2.4%
To get ideas and find words	1	2.4%
Total	**41**	**100%**

 Observation: The primary reason for using digital tools was **to get ideas (61%)**

3.Did you use more than one digital tool to write the second draft? Which ones?

Number of tools used	Frequency (n)	Percentage (%)
Only one tool	20	55.0%
More than one tool	16	45.0%
Total	**36**	**100%**
Type of tools used		
Only Chat GPT	10	27.0%
Only Google	10	27.0%
Both Google and Chatgpt	10	27.0%
Other tools	6	20%
Total	**36**	**100%**

Observation: One tool is generally used **(55%)** to write a second draft**,** with **Google** and **Chatgpt** being the most used ones.

Response	Frequency (n)	Percentage (%)
Yes	34	85.0%
No	6	15.0%
Total	**40**	**100%**

Observation: A strong majority (85%) usually write their first draft **without** using any digital tool.

Response	Frequency (n)	Percentage (%)
Yes	34	85.0%
No	6	15.0%
Total	40	100%

Observation: This confirms the earlier result: most respondents **(85%)** usually draft without digital tools.

Response	Frequency (n)	Percentage (%)
Strongly Agree	10	27.0%
Agree	28	70.0%
Disagree	2	3.0%
Strongly disagree	0	0.0%
Total	40	100%

Observation: Most students believe their writing improves thanks to digital tools

Response	Frequency (n)	Percentage (%)
Strongly Agree	0	0.0%
Agree	20	51.0%
Disagree	18	46.3%
Strongly disagree	1	3.0%
Total	40	100%

Observation: There is a **divided opinion** between participants concerning dependence on digital tools.

Response	Frequency (n)	Percentage (%)
Strongly Agree	6	14.6%
Agree	18	43.9%
Disagree	12	29.3%
Strongly disagree	4	12.2%
Total	40	100%

Observation: More than half of the participants (those who strongly agree/agree) Believe that their creativity is threatened due to digital tools.

Responses	Frequency (n)	Percentage (%)

Responses	Frequency (n)	Percentage (%)
Grammar	*4*	*7.3%*
Vocabulary	*13*	*34.1%*
Spelling	*3*	*6%*
Generating Ideas	*13*	*34.1%*
Sentence Writing	*1*	*4.0%*
Paragraph Writing	*4*	*7%*
Punctuation	*1*	*4.0%*
Grammar, vocabulary & ideas	*1*	*4%*
Total	*40*	*100%*

Observation: The two most frequently cited areas were **Vocabulary (34.1%)** and **Generating Ideas (34.1%)**, showing that these are the **primary concerns** for most respondents

10. Do you think that teacher feedback on your writing is less/more helpful than automated feedback? Would you explain?

Categories of Answers	Percentage	Justifications
Teacher feedback is more helpful	62%	-Accuracy of feedback -Personalized feedback -Face-to-face feedback is more instructive -To meet teachers' expectations -Context-specific -Detailed explanations of content -Motivating -Automatic feedback addresses only surface-level errors -Automatic feedback doesn't help to develop all the writing skills -Teachers give more ideas than AI
Automated feedback is more helpful	11%	- Autonomy in learning -Instant feedback - Suggestions of improvement -Teachers don't have enough time for feedback
Both are helpful	17%	The same types of arguments are mentioned above in this table

4.3. Summary of the results obtained from the Questionnaire

The data yielded from the participant's answers to the questionnaire disclose three important preferred digital tools in writing which are: Google (36%), ChatGPT (31) and Grammarly (22%). These are mostly used to generate ideas (61%) and search for vocabulary (26%). Generally, only one tool is used but sometimes Google and ChatGPT are combined in

assisting writing. 85 % of the participants use these digital tools in the editing stage and not in the first draft and 72% of participants confirm that they do not use these tools to generate whole texts. Most participants (97%) agree/strongly agree that the AI improves their writing skills. However, when it comes to creativity, the participants are split into those who think that AI threatens their creativity (58%) and those who see no threat (41%). Participants are also split into those who feel dependent on technology in writing (46) and those who do not feel dependent on it (51). Results also indicate that teacher feedback is more appreciated by participants (62%) than automatic feedback because it is more accurate, specific, personalized, detailed, context-specific, motivating, and so on. But some advantages of automatic feedback are also mentioned namely, the instance of feedback and the various suggestions provided for improving language.

5. Discussion

This section is structured around the three main research questions addressed in this study.

5.1. How do students use the digital writing-assistance tools?
        a.   Which AI tools are mostly used in writing?
        b.   In which areas the AI tools are mostly needed?
        c.   Are AI tools used to produce whole texts?

Findings revealed that the participants resorted mostly to three digital devices to perform writing tasks, one is a **search engine (Google, 36%),** the second is a **text and feedback generator (ChatGPT, 31%)** and the third one is an **automatic writing evaluator (Grammarly, 22%).** These results also show that no digital tool or application is exclusively used by participants who might need to find ideas through Google, edit their work through Grammarly, or obtain a whole text with ChatGPT. Indeed, most participants (72%) did not opt for the third choice but the 27% of those who used ChatGPT to do the assignments are not to be neglected. This practice is first unethical and can also lead to intellectual laziness. The use of technology in learning is an inescapable reality that we should accept as asserted by Alharabi (2023) but we should be cautious about how students use it. What is striking is that most students (62%) resort to these tools to get ready-made ideas instead of editing or reformulating their texts. This is also a danger to creativity as confirmed by 43% of the participants who thought their creativity was threatened by technology and 51% who felt dependent on AI tools in producing texts. This is also confirmed by some researchers (Omar, Miah & Belmasrour, 2014; Huang & Wilson, 2021; Ranali, 2021) who view that AI-based authoring tools threaten the development of authentic writing and those who warn against the unethical use of AI-based authoring tools (Warshauer, 2007; Eaton, Mindzak & Morrison, 2021; Yan, 2023)

In sum, the way students use AI-based tools in writing pushes them to become either dependent on AI, unable to create their texts, and/or unethical by stealing others' words and ideas.

5.2. How do students perceive automated feedback?

On the whole, the majority of participants (97%) perceive AI tools positively and think that AI improves their writing skills. However, 62% of the participants find that teacher feedback is more relevant for them than automatic feedback because the teacher provides more accurate, specific, personalized, detailed, comprehensive, and context-specific feedback. In addition, teacher feedback is seen as a source of motivation. On the contrary, automated feedback is less valued by participants who find that it targets only superficial points; nevertheless, it is praised for the suggestions it provides mainly that teachers are not always available to address students' weaknesses. Undoubtedly, a bulk of other research (William &

Beam, 2018; Sue, Lin, & Lai, 2023; Alkhaladi, 2023; Steiss et al., 2024) supports the use of AI to develop writing skills and reduce errors, yet it has also been shown in some studies (Steiss et al., 2024) that human feedback outscores automated feedback mainly in terms of quality and accuracy which corroborates our findings. Steis et al. (2004) argue that AI may be useful in early drafts when a human evaluator is not available or in large classes as advised by Mahapatra (2024). Given that students use AI and believe that these tools are helpful as teachers are not always available, so research recommends the effective integration of AI tools in writing classes to both scaffold students' writing and lessen the teachers' burden of giving feedback. Nunes, Cordeiro, Limpo, and Castro (2022) argued that AI tools are more effective when they are integrated into instructional programs and when both AI and teacher feedback are combined. Warshauer (2007) encourages teachers to remain involved in the process of AI feedback to ensure students engage meaningfully with it.

5.3. Do students benefit from the AI tools to improve their writing skills?

Based on results obtained from writing tests, it is inferred that despite the usefulness of AI in learning, students do not make the most of it to grow as independent good EFL writers. In this study, the same writing topics were assigned to participants on three separate occasions (Time 1, Time 2, Time 3) with an interval of two weeks between the last task (Time 3) and the two previous ones (Time 1 and Time 2). In Time 2 when participants were required to use AI to produce paragraphs, they improved their writing significantly from Time 1 in all the writing areas examined in this study. However, after two weeks they couldn't produce good-quality paragraphs on similar topics. They couldn't even recall the paragraphs they wrote not a long while before. They regressed drastically in all the five areas examined including vocabulary and ideas, in which most students said they used AI to get help. Here is one example of a participant's successive paragraphs:

Topic: There is a debate on whether non-native speakers of English should use standard English or local English in communication. Give arguments to support the different views

Draft ONE (Time 1): The participants were asked to write a first draft without any digital assistance (As the draft was sent electronically, so there was no guarantee that a digital assistance wasn't used)

To answer the debate whether non-native speaker should use standard English or local English, for the use of local English we have to understand that with the variation of mother languages we also encounter the variety of mother tongs, thus the pronunciation of different letters changes from a language to another, some of the English letters may become difficult to pronouns. We can also encounter another problem which some of the used words might go against the culture of the society and the country in question. On the other hand, the use of standard English will facilitate the global communication and the use of a correct and professional form of language, thus using the standard form of English will be more beneficial for both non-natives and natives.

Draft TWO (Time 2). The participants were required to use writing tools to write the second draft. (the second draft was also sent electronically the say day the first draft was sent)

The debate on whether non-native speakers should use standard English or local English, in communication centers around the balance between clarity, professionalism, and cultural sensitivity. Advocates for standard English argue that it enhances credibility, clarity, andprofessionalism, fostering a deeper connection with the audience and projectingcompetence. On the other hand, supporters of local English emphasize the importance oflinguistic diversity, cultural sensitivity, and inclusivity, asserting that embracing localvariations of English can enhance audience engagement, authenticity, and

understanding.The choice between standard and local English ultimately depends on the communicationgoals, audience demographics, and the desired impact of the message

Draft three (Time 3). Two weeks later, the participants were required to write on the same topic in class. (the researcher took the phones away from them)

The globalisation of the English language led to the birth of new form of English called world Englishes by Braj Kashru, the sociolinguist Kashru discovered new forms of localized English this last divided them into three circles, inner, outer and expanding this also led to a debat between researchers. Both Kashru and Quirk had their own view upon globalisation of the language, quirk advocate the use of standard form of English or it's native form, in contrast Kashru suggest that native speakers no longer have the exclusivity of English and that standard English for non-native speakers no longer might not be appropriate according to their social context or their ability to pronounce, Williams also support Kashru view on standard and affirm that native speaker don't have control upon the language evolution

The participant in the third draft reiterated ideas from the handout of the lecture but no argument was used to develop the topic about the debate on standard English and world (local) 'Englishes'. In his answer to the questionnaire, this participant said that he used ChatGPT to improve his paragraph in Time 2 (see draft 2) which explains the good quality of this second draft. However, when the participant wrote on the topic for the third time two weeks later, none of the improvements shown in the second draft were maintained. His third draft is too superficial, full of language mistakes, lacks both cohesion and coherence and most importantly no arguments were presented. There are even more interesting ideas in Draft 1 than Draft 3. On the whole, the good performance on the first draft as compared to the third draft might be explained by the fact that the participants sent the first one electronically so they could have probably used digital assistance even though they were asked not to, but in writing the third one, the researcher took mobiles away from students as they composed in class. But what is worrisome is the non-maintaining of the improvements after using AI and worse than that the quality of writing regressed.

Regression in writing found in the delayed experiment (Time 3) might indicate that AI is used to solve a current problem but not to get good outcomes in the long term. The participants didn't even retain the ideas they expressed in the first and second drafts. Almost half of the participants (46) admitted to being dependent on technology when they write and most of them (58%) say also that AI interferes with their creativity which explains why they obtained the lowest scores in writing when no writing support system was used. It seems also that the improvement in writing due to AI which was perceived by most participants (97) meant probably immediate and short-term improvement, the gains are not maintained in the long term. This finding corroborates the findings of other studies such as those of Wilson (2021) and Ranali (2021), who found no long-term improvements or independent writing following the use of AI writing supporting systems. Boyle (1993)'s view that technology diminishes students' cognitive abilities and takes away much of the learning process is logical because in the absence of any improvement or independence in writing, we can argue that AI hinders more than it helps learning. However, this conclusion should be taken with caution because in our study the participants used AI tools in isolation without any integration of them in class instruction and teacher feedback, consequently, other studies on long-term integration of AI in writing classes are needed to measure AI impact on learning outcomes. What seems obvious nevertheless is that without teacher guidance, students' use of electronic writing tools remains less effective.

6. Conclusion

AI is a recent phenomenon and the impact of its integration in learning is yet to be measured. This study concludes that students do not use technology effectively for the sake of learning which results in non-lasting improvement of their writing skills. Teacher feedback remains more important than automated feedback to better guide students in writing. AI cannot replace teachers who know better the weaknesses of their students and who can provide the necessary feedback that contributes to the growth of students as academic writers. At the same time, technology is inevitable for both teachers and learners. This implies that teachers have a pivotal role in scaffolding students and finding strategies to help them use AI effectively and in a more focused manner to improve in all areas of writing. This in turn will clear off the heavy burden of correcting. Future studies should be more directed at how best AI could be integrated into class to ensure better and long-term outcomes.

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