Research Article

Investigating Iraqi EFL Learners' Perceptions of AI- Supported Writing Task: The Mediating Role of Language Proficeincy

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ABSTRACT

This study explores the perceptions of intermediate and advanced Iraqi EFL students regarding autonomy and learner identity when using AI tools for writing development. AI tools provide students with immediate feedback on grammar, structure, and clarity, promoting self-reliant learning. While these technologies offer significant benefits, there are concerns about overreliance on AI, potentially undermining students' sense of ownership over their learning and writing progress. Through semi-structured interviews with 30 Iraqi students, the study examines how AI tools impact their perceptions of autonomy and evolving learner identities across proficiency levels. The findings reveal that AI tools support writing improvement, but students express divergent views on whether AI promotes true autonomy or fosters dependency. Advanced students tend to view AI as a supplement to existing skills, while intermediate students often rely more heavily on AI for guidance. This research highlights the complex relationship between AI usage, autonomy, and identity in language learning.

Introduction

The employment of artificial intelligence (AI) in education has significantly expanded recently, particularly with the advent of generative AI tools like ChatGPT. These tools are mainly utilized to enhance learners' capability in producing content, particularly in areas such as writing. AI-driven

platforms such as Grammarly, Quillbot, and ChatGPT offer automated feedback on grammar, sentence structure, and writing coherence, enabling students to make immediate corrections and revisions on the produced text. This has revolutionized the way writing is taught and learned in language courses, offering opportunities to practice, revise, and improve writing without the constant intervention of teachers (Al-Raimi et al., 2024).

There are numerous studies that have highlighted the positive impacts of AI tools on writing development. The main findings in these studies have proven that AI can assist students in generating ideas (Marzuki et, al., 2023; Chatti, 2024), structuring essays (Banihashem et.al., 2024; Vovk, 2024), improving grammar (Kim, 2019; Mishchuk et.al., 2024; Vera et.al., 2024), and enhancing overall textual clarity (Fathin et.al., 2024; Maronecelli et.al., 2024). For instance, Zou and Huang (2024) examined the role of ChatGPT in graduate students' learning processes and found that the tool significantly contributes to developing their writing skills through feedback on errors and suggestions for improvement. Furthermore, AI tools can offer students autonomy in learning by providing consistent support that helps develop their skills at their own pace.

However, despite the growing prevalence of AI in writing instruction, there remain certain concerns about learners' and users' overreliance on these tools, with implications for learner autonomy and identity. The use of AI in writing courses may change how students perceive themselves as learners, particularly concerning their independence in completing tasks and developing skills. While some research has delved into AI's applicability to language learning, only a few studies focus on students' perceptions of their autonomy and learner identity when using AI to enhance writing abilities.

While the application of AI tools in education is well-documented, there is only scant attention paid to how students perceive their autonomy and learner identity when working with AI-based writing tools. Al-Raimi et al. (2024) highlight the role of AI tools in improving writing skills among learners, but what has been left underexplored is the psychological and pedagogical implications of AI's role in shaping learner identity and autonomy. For example, ChatGPT offers students a platform to independently develop and revise their writing, but this very assistance may affect students' perceived ownership of their learning process (Javaid et al., 2023). The balance between benefiting from AI facilities and retaining control over their learning trajectory remains an important but under-researched area.

Research has shown that AI can be influential in fostering learners' writing development. Nevertheless, few studies zero in on how students perceive their ability to maintain autonomy over their writing when they rely on AI-generated suggestions. This raises critical questions about whether AI tools are empowering students to become more self-directed learners or fostering dependency, thereby diminishing their sense of personal growth and identity in the learning process. Given the complexities of language acquisition and writing skill development, understanding these dynamics is crucial, especially in contexts where students are at varying levels of language proficiency.

This study seeks to examine the perceptions of intermediate and advanced Iraqi students of English as a foreign language (EFL) regarding their autonomy and learner identity when using AI tools to advance their writing skills. The research aims to address the gap in the literature on how students at different proficiency levels view their engagement with AI tools like ChatGPT. While there has been a noticeable focus on the benefits and drawbacks of

using AI for writing development, less attention has been paid to how students interpret the role of AI in their academic growth, especially in terms of their independence as learners and their evolving learner identities.

By focusing on two proficiency levels, the study aims to capture potential differences in how intermediate and advanced students perceive AI's role in their learning. Intermediate students, who may still be developing fundamental language skills, might rely more heavily on AI tools for guidance and correction. Advanced students, on the other hand, may use AI tools to refine and polish their work, potentially exercising greater control over the learning process. The inclusion of these two groups will provide insights into whether proficiency level influences perceptions of autonomy and identity when using AI in writing courses (Zou & Huang, 2024; Fitria, 2023). To address this gap, the present study was guided by the following research questions:

1) What are the perceptions of intermediate and advanced Iraqi EFL learners regarding the impact of AI tools on their writing development?

2) How do intermediate and advanced Iraqi EFL learners perceive the influence of AI tools on their learner autonomy?

3) How do intermediate and advanced Iraqi EFL learners perceive the influence of AI tools on their evolving learner identities?

4) How do intermediate and advanced Iraqi EFL learners differ in their perceptions of autonomy and learner identity when using AI tools for writing development?

Literature Review

With the increasing integration of Artificial Intelligence (AI) in educational contexts, its potential to support language learning, particularly in writing development, has gained significant attention. One essential facet in this domain is how AI tools affect learner autonomy and identity. Students' perception of their own ability to take charge of their learning (autonomy) and how they view themselves as learners (identity) play crucial roles in the effectiveness of these tools. This review examines the existing literature on learner autonomy and identity, specifically in the context of using AI in language learning.

Learner autonomy and identity: An overview

Learner autonomy, first developed by Holec (1981, p. 3), is defined as "the ability to take charge of one's own learning." It is generally understood as the capacity of learners to manage their own learning processes (Little, 1991). Benson (2011) maintains that this concept is rooted in the belief that learners can take responsibility for their own educational experiences, which includes setting goals, monitoring their progress, and reflecting on their learning outcomes. Benson (2011) expands on this by noting that autonomy is not an innate feature but a capacity that develops over time with proper support and experience. In the context of language learning, learner autonomy involves not only the ability to engage with language materials independently but also the motivation in this path, thus emphasizing an active role in language acquisition (Holec, 1981; Oxford, 2003). In so doing, what is required is to develop decision-making skills, self-reflection, and intrinsic motivation, which are vital for language learning success (Little, 2007).

Thus said, learner identity refers to how students perceive themselves in the context of learning and using a language. Identity in language learning embraces various dimensions, including personal, social, and cultural factors that influence how individuals perceive their roles as learners (Norton, 2000). This identity construction is dynamic and often shifts based on context, experience, and

interactions with others (Gee, 2000). In essence, learner identity and autonomy are closely tied; a learner's sense of self greatly influences their ability to take initiative and responsibility in their educational journey (Palfreyman & Smith, 2003). In the context of language learning, learners often negotiate their identities based on how they view themselves as proficient users of the target language (Pavlenko & Lantolf, 2001).

Learner Autonomy and Identity in the Language Learning Process

Learner autonomy plays a crucial role in the course of the language learning process. Research suggests that when learners feel a strong sense of self-efficacy and ownership over their learning experiences, their motivation increases, leading to better outcomes (Deci & Ryan, 2000; Little et al., 2017; Zimmerman, 2002). Furthermore, learners who adopt autonomous strategies often report greater satisfaction and increased engagement in their learning (Sanjaya, 2023; Littlewood, 1999; Nguyen, 2014). Little (2007) emphasizes that understanding learners' autonomy fosters target language proficiency. In this connection, Dam (1995) asserts that autonomous learners are better able to adapt to different learning environments, set personal goals, and reflect on their learning progress. As noted by Reinders and White (2016), autonomous learners are more likely to take advantage of opportunities for authentic language use, such as engaging with native speakers or utilizing language-learning platforms. For instance, studies have shown that learners who are encouraged to develop their own goals and assess their progress can cultivate a stronger sense of agency and identity (Benson & Voller, 1997; Little, 2022).

Learner autonomy and identity in AI-powered Learning Process

AI technologies have increasingly been incorporated into a domineering language education to provide personalized, adaptive learning experiences. These tools, such as intelligent tutoring systems (ITS), AI-powered language learning apps (e.g., Duolingo), and conversational agents (e.g., Pi), provide learners with the facility to interact with content in new ways, potentially influencing their perceptions of autonomy and identity (Godwin-Jones, 2023). While autonomy and identity are often studied separately, there is an intersection between the two. When learners feel autonomous, they are more likely to engage in identity negotiation, as they have control over their learning experiences. For example, the flexibility of AI-based systems allows learners to choose content that resonates with their identity (Reinders & White, 2016).

AI-based platforms offer adaptive learning paths that can adjust to learners' needs in real-time. Research by Kukulska-Hulme and Viberg (2018) highlights that AI-based tools such as mobile apps and intelligent tutoring systems (ITS) enhance learner autonomy by providing real-time feedback and personalized content. These systems allow learners to practice at their own pace, thereby granting more control over the learning process.

Accordingly, conversational agents, or AI-powered chatbots, have gained popularity as a means of providing real-time conversational practice. Studies such as those by Hwang et al. (2020) have demonstrated the positive impact of chatbots on language learners' autonomy, as these tools allow students to practice without the pressure of a human interlocutor. The interactive nature of chatbots empowers learners to take charge of their conversational practice, potentially leading to greater linguistic confidence and self-regulation (Hwang et al., 2020). However, the effectiveness of such systems may depend on how well they engage

learners and allow room for meaningful, personalized interactions (Kohnke et al., 2025).

However, some scholars argue that AI systems, while providing more refined content, can reduce learners' autonomy by creating over-reliance on machine-driven guidance. In this connection, Wei (2023) implies that while AI tutors in language learning apps support immediate error correction and feedback, learners reported feeling less in control over their learning choices, as the AI directed most of the learning path. Thus, the question of how AI balances promoting autonomy with the risk of dependency remains critical.

As it concerns identity, several studies have investigated how AI tools affect learners' evolving linguistic identities. For instance, studies by Szabo and Szeko (2024), Alsanger (2024), and Satvati et.al. (2023) suggest that AI-powered tools, by offering anonymized, low-stakes environments, may allow learners to explore new identities more freely (see also Zaman et al., 2024). AI tutors and chatbots create a "safe space" for learners to experiment with different linguistic roles, such as practicing professional or informal registers. On the other hand, Learners from marginalized linguistic communities may struggle to see their identity reflected in AI-mediated content, potentially leading to feelings of alienation (Saltman, 2022).

Another strand of research has examined how AI, when integrated with immersive technologies like virtual reality (VR), can influence identity formation. In a study by Yeh and Lan (2018), learners who interacted with AI-driven avatars in virtual environments reported heightened engagement with their linguistic identities. These virtual environments allow learners to embody different identities, such as a global citizen, and engage in intercultural communication without the constraints of a real-world environment. The multimodal nature of these environments allows

learners to experiment with different language identities (Yeh & Lan, 2018).

Research Method

Design

The present study employs a qualitative research design, using semi-structured interviews to collect data. This approach is appropriate for exploring the perceptions and experiences of participants in depth (Ali, 2024). This method allows for more flexibility in responses and a more comprehensive understanding of how Iraqi students use AI tools in their English language learning.

Participants

The study involved 30 Iraqi students of the English language at intermediate and advanced proficiency levels. The participants were screened to ensure that they had sufficient experience with using AI tools for language learning. Prior to the interviews, participants were asked to answer demographic questions about their use of AI tools, including:

- Whether they had used AI tools for educational purposes;
- The specific areas or skills they applied AI tools to;
- The extent to which they relied on AI tools, both for educational and non-educational purposes.

We invited the students who had regularly used AI tools for various skills in language learning (writing, speaking, listening, etc.) and non-educational purposes.

Data Collection

Data were collected through semi-structured interviews conducted via online platforms, such as Zoom and Google Meet. Each interview lasted

between 30 to 45 minutes, allowing for in-depth discussions while maintaining focus on key themes.

Interview Procedure

Before starting the interviews, we informed the participants about the purpose of the study and sought their consent to record the interview. The interviews were guided by open-ended questions designed to explore the participants' experiences, perceptions, and challenges regarding the use of AI tools for language learning. Each interview was recorded, and the audio recordings were later transcribed verbatim for data analysis. The interview was carried out in Arabic, providing the interviewees with a more convenient atmosphere to express their experiences. Later, the authors translated the transcribed texts into English. However, the authors asked a translation expert to assess the English translation for any instances of mistranslation or biased influences in translation.

Data analysis procedure

We analyzed the transcribed interview data using thematic analysis to identify recurring themes and patterns related to the use of AI tools in language learning. The thematic analysis allowed for both an inductive and deductive approach, where key themes emerged from the data, while also being guided by pre-determined areas of interest. Through so doing, the study aimed to uncover insights into how Iraqi students perceive and interact with AI tools to enhance their language learning experiences across different proficiency levels.

Findings

Preliminary and general evaluations of AI tools in writing

In their initial discussions concerning the application of AI tools in the development of their writing skills, both intermediate (B2) and advanced (C1) students articulated a range of benefits in connection with the employment of AI tools in completing their writing assignments. The advantages highlighted by both groups of students are organized into comparable thematic categories; however, their perceptions and interpretations vary between these two groups.

Teacher-independent learning

One prominent theme that emerged is the aspect of teacher independence. Intermediate students maintained that AI tools empower them to work and write independently from their traditional classroom educators, effectively functioning as a 24/7 tutor available to deal with inquiries at any moment. This constant accessibility is a crucial feature, enabling students to attain constructive feedback from virtual support systems. According to Intermediate students 1 and 2, the constructive feedback figures in to form: On the one hand, AI provides them with corrective feedback to improve the accuracy of their writing ("*...also ask them to help with my mistakes in my writing...*" *[*INT. St. 1*]*). On the other hand, as intermediate student 2 holds, the AI-generated constructive feedbacks are realized in the form of analytical feedback, where the AI tool grants the students a detailed observation of the structure of the sentences and text ("*...they help me to have a full analysis of my mistakes...*"). As noted during the interviews, this round-the-clock availability not only grants students unlimited access to essential guiding information related to their writing but also allows them to receive tailored feedback, including corrections and alternative phrasing suggestions, which can ultimately enhance their academic performance.

INT. St. 1. AI tools are really fantastic. There are many of them and I usually see them as an always-present teacher that I can ask them some questions and also ask them to help with my mistakes in my writing. Personally, I think AI tools are even better than teachers. You know, it tells me my mistakes,

help me do well in my writing courses but does not cut my grade, unlike what our teachers do even though they give us some hints about how to correct or improve our sentences. I don't want to say that our teachers don't teach us well, but you know, the problem is that it seems as if we should pay some points to learn, like a kind of transaction.

INT. St. 2. AI tools are very effective in that they help me to have a full analysis of my mistakes. My teachers usually ask me to correct a sentence, simply because it is incorrect, but AI tools provide me with alternative and says why it is incorrect. I understand that teachers should check the assignments of many students and do not have time to spend only for one student. This is exactly where AI tools appear more efficient

Intermediate student 2 also emphasized that the large population of students in their classes often results in teachers providing only cursory feedback and superficial comments, limiting students' opportunities to learn about proper writing styles effectively ("...*I understand that teachers should check the assignments of many students and do not have time to spend only for one student....*"). In contrast, AI writing tools not only present students with varied alternative structures but also serve as pedagogical instruments that facilitate the refinement of their writing skills ("...*This is exactly where AI tools appear more efficient*" [INT. St. 2).

Additionally, intermediate students underscored another significant advantage of employing AI tools: As intermediate student 1 claims, these resources insulate them from the potential loss of grades as they strive to improve their writing capabilities. According to this student, this immunity from losing grades is an instrumental feature that crucially overrides the role of teachers ("...*I think AI tools are even better than teachers. You know, it tells me my mistakes but does not cut my grade...*" [INT. St. 1]). This student highlighted that learning from mistakes in traditional

educational environments often results in grade penalties, suggesting that the conventional learning process can be detrimental to their overall academic performance and even the destiny of their occupation in the future ("...*that it seems as if we should pay some points to learn, like a kind of transaction...*" [INT. St. 1]). Conversely, the intermediate students stress that the use of AI tools not only assist them in the development of their writing skills but also enables them to achieve higher grades without the fear of grade deduction, thereby fostering a more favorable educational experience ("...*You know, it tells me my mistakes, help me do well in my writing courses but does not cut my grade...*" [INT. St. 1]).

ADV. St. 1. I am very good at writing but it has always been a great aspiration for me to write professionally as in journalist prose. I know for this to happen I need to expand my vocabulary resources and become maximally proficient in English advanced grammar. However, AI tools allow me compare my own version with the professional alternatives offered by the AI tool. This gives me an opportunity to practice more and also an understanding of my level and distance to get to the ideal level.

ADV. St. 2. I am very interested in editing job; it really gives me a good feeling revising and recreating a text while keeping the original meaning unchanged, but refined. I have studied a few numbers of different coursebooks and practice books to become professional and proficient in editing. But, you know, these books give you only cliché exercises, often failing to hone your creativity. However, AI tools give me hundreds of exercises and feedbacks on my progress and alternative offers for change that I can make on the text. AI has helped me a lot during the last three months in developing my skills in editing.

For advanced students, the availability of AI writing tools as ubiquitous teachers, as well as the

ability to work independently from teacher-centred instructional models. This includes tasks such as editing (ADV St. 2) and composing texts across various genres, such as journalistic pieces (ADV. St. 2). According to advanced students, AI writing tools serve as valuable resources by offering advanced learners the opportunity to critically assess their writing progress. As an advanced student, I hold that comparing their own texts with the feedback and alternative versions generated by AI engages them in a reflective evaluation process. In this connection, advanced student 1 emphasizes that the very innovative feature of AI tools provides students with a forward-looking perspective and, as a result, enables them to envision their potential achievements by comparing their work against the ideal standards set by AI-generated texts ("...*AI tools allow me compare my own version with the professional alternatives...*" [ADV. St. 1]). Through this comparison, advanced students 1 and 2 believe that students gain insight into the subtleties of effective writing, allowing them to identify specific areas for improvement and develop a clearer understanding of the criteria that define the ideal level in their profession. As they engage with these AI-produced models, learners are not only motivated to reach these aspirational benchmarks but also encouraged to explore various stylistic approaches, ultimately fostering a more nuanced and sophisticated approach to their own writing ("...*an understanding of my level and distance to get to the ideal level...*" [ADV. St. 1]; "...*AI has helped me a lot during the last three months in developing my skills in editing...*" [ADV. St. 2]). Such a dynamic interplay between self-assessment and exposure to high-quality corrections and alternatives cultivates a growth mindset, empowering students to set ambitious goals and strive for continuous improvement in their writing abilities.

Moreover, students believe that the success of AI tools in this context lies greatly in their capacity to offer an extensive array of exercises that immerse students in a pool of writing practice, what is allegedly lacking in conventional means of education and learning ("...*these books give you only cliché exercises, often failing to hone your creativity...*" [ADV. St. 2]). Advanced student 2 holds the view that the abundance of resources enables learners to engage in repetitive and diverse writing tasks, thereby reinforcing their skills and ensuring they meet designated learning objectives The student states that the distinguishing advantage of AI writing tools over traditional, book-based learning methods lies in their capacity to provide a vast and varied array of exercises tailored to the specific needs of advanced learners. Conventional coursebooks, particularly in fields such as journalistic writing and editing, often present a limited selection of exercises that can be repetitive and fail to engage students meaningfully. Advanced students have identified this shortcoming as a significant drawback of relying solely on coursebooks for their writing development.

In contrast, AI writing tools offer dynamic, interactive exercises that adapt to the individual learner's progress and preferences ("... *AI tools give me hundreds of exercises and feedbacks on my progress and alternative offers for change that I can make on the text...*" [ADV. St. 2]). This adaptability allows students to engage in diverse writing tasks that reflect real-world scenarios and contemporary writing styles, thus enhancing their critical thinking and creativity. Additionally, the immediacy of feedback provided by AI tools empowers students to make quick adjustments and improvements and, thus, fosters a more responsive learning environment.

Psychological assurance and stress-free learning process

For intermediate students, the integration of AI writing tools significantly alleviates the emotional anxiety often associated with receiving feedback from instructors. The intermediate students emphasize that this emotional burden is frequently felt when teachers provide them with feedback on their performance. Intermediate student 3 states that teacher's comments and evaluations on their writing has rendered writing as a main source of psychological distress ("...*writing has been imposing huge amounts of stress and anxiety on me...*" *[INT. St. 3]*). The very emotional and psychological pressure is partly due to the student's awareness of their proficiency level in writing which is conceived of being below the standards of their educational level ("...*due to the fac that my poor performance in writing will...*" *[INT. St. 3]*). For another part, the heightened stress has its roots in the teacher's feedback that appears as a reflection of the power dynamics inherent in the educational system. In this context, the teacher's authority in disqualifying their writing abilities can be negatively consequential to the final academic assessment and evaluation of the student, as noted in intermediate student's remarks: ("...*result in the assessment and judgment of my academic performance...*" *[INT. St. 3]*).

In contrast, AI tools provide a non-judgmental platform for these students, enabling them to refine their writing within a stress-free evaluative environment created by AI tools. The role of AI in this context is particularly noteworthy, as it mitigates the stress related to evaluations of academic performance ("...*since I have started using AI tools...*" *[INT. St. 3]*). Unlike human instructors, AI tools do not represent or signify evaluative power and allow students to engage with their writing mistakes in a constructive way without any fear of repercussions on their grades or academic status. This supportive environment fosters a sense of autonomy and empowerment,

which is crucial in encouraging students to take risks in their writing and explore new ideas without the fear of immediate judgment.

INT. St. 3. Frankly speaking, I am not very good at writing. I always receive critical feedbacks from our instructor, stating that my texts are disappointingly weak. For this, writing has been imposing huge amounts of stress and anxiety on me due to the fac that my poor performance in writing will result in the assessment and judgment of my academic performance. But, since I have started using AI tools to improve my writing, I have realized that I am getting gradually better and, consequently, I feel considerably less stressed and anxious. I think this partly is because of my improving writing skills and partly because the AI has nothing directly to do with the assessment of my academic performance and degree.

However, for advanced students, the anxiety and stress associated with the writing process are often linked to the challenges of effectively communicating ideas and minimizing the risk of misunderstanding in regard to real-life situations ("...*I used to overthink what if my intention, justifications, and purposes won't be understood rightly...*" *[ADV. St. 3]*). Advanced students highlight that proficient writing skills are crucial, as their writing performance, intended to manage certain affairs related to wider contexts of communication, may lead to substantial consequences. One advanced student articulated that, prior to utilizing AI tools for writing assistance, they would engage in extensive revision and multiple readings of his texts, a process that significantly slowed their productivity ("...*This put a heavy pressure on me and made me review, revise and rewrite parts of my cover letter for several times...*" *[ADV. St. 3]*). However, with the advent of AI tools, the student stresses that has experienced a transformative shift in his writing practice. These tools enable them to receive critical

feedback tailored to their specific concerns, allowing for a more efficient review process. As he noted, this access to AI-driven assessments has alleviated their anxiety related to writing, fostering a confidence in their abilities ("...*But since I have been working with AI, I easily ask it to assess my writing based on my concerns and it gives me a very clear evaluation of how the texts sounds. I have learned a lot doing this...*" *[ADV. St. 3]).* The integration of AI has not only enhanced their writing efficiency but has also empowered them to approach writing tasks with a greater sense of assurance and clarity.

ADV. St. 3. I am trying to study abroad and for this I need to apply for well know universities and I have to write cover letters and SOPs which are effective in getting funds or scholarships. Before I become aware of the existence of AI tools, I used to overthink what if my intention, justifications, and purposes won't be understood rightly. This put a heavy pressure on me and made me review, revise and rewrite parts of my cover letter for several times. But I didn't get content with it and started to get anxious. But since I have been working with AI, I easily ask it to assess my writing based on my concerns and it gives me a very clear evaluation of how the texts sounds. I have learned a lot doing this.

Perceptions on learners' autonomy

In the preceding section, it was noted that both intermediate and advanced students perceive the use of AI tools as fostering a certain degree of independence from their teachers. This perception brings to the fore the insight that the intermediate students delineate their educational autonomy in complete abstraction and independence from school and conventional educational institutions. However, this fails to be the case with what our participants expressed with regard to their involvement with AI tools. In this connection, a

critical question remains regarding the extent to which AI truly enables students to become fully autonomous in their learning. To explore this further, we posed a series of follow-up questions, which revealed divergent perspectives, particularly among the intermediate students. One group of these students expressed the belief that AI serves only a complementary role in their education, reinforcing and supplementing the support they receive from teachers. This view aligns with the perspective shared by advanced students, who also emphasized the utility of AI merely in enhancing skills that may be crucial for career advancement. They argued that AI is beneficial in enhancing the competencies that are relevant in the modern workforce.

Conversely, a second group of intermediate students rejected the notion that traditional teaching methods still retain a significant role and value in the super-technologized world. The main argument constructing the bedrock of the discourse of these students is that the rapid technological changes of the contemporary world critically necessitate the acquisition of new, more relevant skills to AI tools and technologies, which can be easily accessed through AI tools. They contend that the focus on traditional knowledge, which can be readily obtained via AI, is outdated and unnecessary. From their perspective, the reliance on AI diminishes the need for traditional pedagogical approaches, as AI not only facilitates learning but also serves as a more efficient and effective means of acquiring the skills needed for the future. This divide in perception reflects broader debates and arguments about the role of technology in education and the relationship between students and educators in the digital age.

Balanced autonomy for present and future

A subset of intermediate students holds the view that in fostering students' autonomy, the function of AI tools can be considered as complementary

role to the instruction the students receive from their teachers. These students distinguish between the autonomy that can be enhanced by both AI and educational systems due to the discrepancies in the functions and purposes of AI tools and traditional educational settings. For instance, according to intermediate student 4, the categorization of AI tools as inherently educational disregards the multidimensionality and multi-purposed-ness of AI tools. What intermediate student 4 emphasizes is that AI tools are multifaceted, multipurpose instruments, with education being only one of their functionalities ("...*they have other functions and uses that can help us in different areas but we don't see them...*" [INT. St. 4]). Therefore, it will appear far from realistic that AI would be viable to make students autonomous. Implying that AI tools will not grant them the capability to seek learning autonomy without the school classrooms, intermediate students 4, 5, and 6 assert that they will not be able to do so autonomously until they gain sufficient knowledge from teachers about the fundamentals of language and receive teachers' assessments, which are based on their perceptions of students' real capacities and abilities. Thus, AI will not bestow autonomy to students since AI does not teach them the ropes, but provides them with ready-made final products. For these students, schools and universities are the sole reliable and authentic spaces for educational purposes, with structured curricula, pedagogy, and teacher-student interactions. Nevertheless, these students add that AI tools can serve as valuable supplements to classroom instruction that will lead to enhancing and supporting the learning process.

INT St. 4. I really cannot understand that AI equals teachers. Yes, I don't ignore that AI helps students get better grades and write better texts, but it does not mean that it can replace the teachers and schools. AI tools are very important in writing and education, but they have other functions and uses that can help us in different areas but we don't see them and only use it for doing our assignments. That we can use AI systems to improve our writing skills does not mean that we could do it if we didn't know anything about correct grammar, formal styles of writing, and any advanced words. AI help us, but does not make us independent from teacher till we acquire more and more.

INT St. 5. I personally believe that I cannot solely rely on AI tools in writing without needing my teachers to approve my writing. I strongly believe in teachers as the only reliable sources for our assessment. I use these tools quite often and they have been of great aid for me to improve my writing skills. But I still need to learn a lot in order to be independent from teachers. For this to happen, I need to gain a huge body of knowledge to be able to discern that the text powered by AI is reliable or not.

INT St. 6. I wonder why some people think that AI tools can make them independent. No, I don't think it is true. AI only help us get better grades and write well-phrased paragraphs and essays. But we need teachers who know what we need to learn at some particular levels and stages and whether we have made any progress or not. They also provide us with basics and fundamentals of writing such as grammar, vocabulary, paragraph and essay structures, etc.

Advanced students also share the perspective of intermediate students in recognizing that the use of AI does not inherently lead to full autonomy in learning. These students generally view learner autonomy as a longitudinal process that is contingent upon the time invested in learning and the individual's sustained efforts to independently master content ("...*Learning mainly depends on spending years for studying hard and obtaining new skills...* [ADV. St. 4]; "...*In order to be an independent writer, I think one needs to learn quite a lot so that they can write with self-confidence...*"

[ADV. St. 5]). In other words, according to advanced students, autonomous learning is by no means achieved through reliance on AI tools or resources but rather through the development of cognitive capacity and internalized knowledge over time. In their view, AI serves primarily as a tool that can facilitate the learning process by providing support to certain tasks and shortening the path to autonomy ("...*I think this mainly requires growth and development in capabilities..." [ADV. St. 4])*.

ADV. 4. Learning mainly depends on spending years for studying hard and obtaining new skills. Therefore, being independent in learning occurs with the maximum amount of uptake through learning that cannot be achieved by using AI tools. I think this mainly requires a growth and development in capabilities that will allow us, say, distinguish whether a text is coordinated with our purpose or not.

ADV. St. 5. I consider AI only as an assistant in writing to save my time. In advanced level, it makes you less dependent to your teacher, but this does not mean that you are autonomous. In order to be an independent writer, I think one needs to learn quite a lot so that they can write with self-confidence, without any fear or anxiety of being misunderstood.

Autonomy for the future

A group of intermediate students who believe that school-based education can be effectively replaced by AI-based education harshly criticize the efficacy of traditional educational systems in the time of all-embracing technologization of everyday life. The underlying argument of this group of students, by way of implication, is that the slow and allegedly irrelevant content they receive at universities and schools fails to foster autonomy in them to be prepared to seek their fortune in the highly automated world, abandoning them without the required skills and knowledge. Conversely, these students state that AI systems bestow them

with autonomy in learning what schools and universities take most of their time to convey. Additionally, AI provides them with prone context to enhance their autonomy in using AI tools and more technologized and updated methodologies in their own field ("...*We need to keep up with the pace of changes and this means that instead of spending our time learning paragraph and essay structures in English, we can use that time to learn about the application of these AI tools in effective learning and teaching..." [INT St. 8])*. As a result, they argue that skills and knowledge conveyed through conventional school curricula have been growing irrelevant in the face of these changes.

INT. St. 7. What we receive as educational content at universities seems to be outdated in comparison with what we need as requirements for certain job positions. I mean the existing education is no longer capable of preparing the graduates for the job market. For example, all students are well aware of the efficacy of AI systems in language education and most of them use these AI tools to develop their skill, but the use of modern technologies and preparing university students how to use them in effective language teaching has no place in universities' curricula. There is a huge gap between traditional and AI-powered writing purposes.

INT St. 8. After using AI for writing and improving my skills, I can say that I learned quite a lot from AI than university classes. I really see no point and use in attending classes for a long time when I can spend only a fraction of that time with AI to learn the same material. I say that things are not like 100 years ago when the pace of changes was too slow. In this modern world, everything changes in a blink of an eye. We need to keep up with the pace of changes and this means that instead of spending our time learning paragraph and essay structures in English, we can use that time to learn

about the application of these AI tools in effective learning and teaching.

The main argument of this group of students keeps saying that schools decimate their autonomy in seeking for modern job opportunities on demand in the society, but instead prepares them for the types of jobs —such as translation, teaching, and editing— that are rapidly disappearing or being transformed ("*...I mean the existing education is no longer capable of preparing the graduates for the job market...*" *[INT. St. 7]*). This leads them to bringing into fore a critical question that why they have to invest time and effort learning skills for jobs that may no longer exist ("*...I really see no point and use in attending classes for a long time when I can spend only a fraction of that time with AI to learn the same material...*" *[INT. St. 8]*)

Furthermore, these students believe that AI instead offers more relevant, immediate learning opportunities with more autonomy, particularly for developing competencies that align with current job market demands ("*...all students are well aware of the efficacy of AI systems in language education and most of them use these AI tools to develop their skill...*" *[INT. St. 8]*). They signpost a shift in the current of the dominant educational system, which goes away from traditional educational models toward a more future-oriented approach that recruits AI-based skills ("*...There is a huge gap between traditional and AI-powered writing purposes...*" *[INT. St. 7]; "...things are not like 100 years ago when the pace of changes was too slow. In this modern world, everything changes in the blink of an eye...*" *[INT. St. 8]*).

Constructing learner identity: Active or collaborative?

According to students' perceptions of the affordances of AI tools in enhancing their writing skills, two primary identities emerge among intermediate and advanced learners. One identity is constructed by a group of intermediate students who perceive AI as a means of independence from traditional educational structures. These students view AI not merely as a supplement to their education but as a gateway to new possibilities in a rapidly evolving technological world. For them, AI appears to be a tool for self-directed learning which fosters autonomy and prepares them for a more global perspective. This group positions itself as active participants in a modern learning paradigm that prioritizes the acquisition of AI-based skills.

In contrast, the second identity is constructed by both advanced and another segment of intermediate students. It reflects a more integrative approach to AI in their learning process. These students view AI not as a means of departure from traditional education but as a collaborative tool, enhancing and deepening their existing educational experience. For them, AI tools serve as a complement to formal education, which helps them refine their skills and provides opportunities for gaining more in-depth insights.

Students as Active AI participants

The group of intermediate students who strongly endorse the value of AI tools in education, particularly for developing their writing skills, construct their identities as active participants in a technology-driven learning environment. They perceive themselves as tech-savvy individuals who not only strive to grasp the growing technologization of both their personal and educational lives but also see it as essential for their success in the future.

INT. St. 9: I have always been interested to technology and technological innovations. If you check the applications I have on my cellphone, you will realize to what extent my life is immersed in technology. And, this explains why I love working with AI tools for various purposes. Another reason is that I have found it quite easy and enjoyable to work with. It makes me very excited to work more

with the wonders of this really intelligent tool. I want to stress that it is not just for writing that I use AI, but rather I use it for different purposes in my life.

INT. St. 10: I am a kind of person who favors things to be carried out quicky. I use AI mainly because it provides me with fast learning. This, I think, is a very crucial issue nowadays because the pace of changes continues to accelerate and what we need to do is to keep up with this high-speecd changes. For example, you need to spend hours to finds a proper complementary resource for one of your courses that you need to study more carefully. This may take hours of your time and your searches may end up with one or two books. But if you only spend a quarter consulting AI tool to give you a list of possible choices with brief descriptions.

INT. St. 11. Among all the advantages AI has, what has been really fascinating for me is that I can learn what I like and this is a great chance to outpace the prolonged teaching at schools and universities where we need at least two semesters to learn the fundamentals of writing. But it will take only 10 days to work continuously with AI to boost your writing skills. Besides, I will learn more when I am given some critical remarks with some solutions on how to correct and revise my writing. Using AI, I will have all these in a blink of an eye.

For this group of intermediate students, the use of AI tools appears more than just a learning aid; it is, rather, seen as a crucial element in synchronizing their activities with the continuous wave of technological change. What seems important for these students is being recognized with the utilization of technology in all aspects of their lives ("...*I have on my cellphone; you will realize to what extent my life is immersed in technology...*" *[INT. St. 9]*). The overarching reason for their captivation with AI technology is the rapidity with which AI enables them in carrying out their commitments ("...*I use AI mainly because it provides me with fast*

learning...*" [INT. St. 9]; "...I use AI mainly because it provides me with fast learning. This, I think, is a very crucial issue nowadays because the pace of changes continues to accelerate and what we need to do is to keep up with this high-speecd changes..."* [INT. St. 10]*). Additionally, the intermediate student 9 implies that the tech-savvy identity opens up new possibilities before the students, honing their curiosity and reshaping their perceptions to seek transcendence in various aspects, including education ("...*It makes me very excited to work more with the wonders of this really intelligent tool...*" *[INT. St. 9]*).

Furthermore, the integration of AI tools in educational affairs enables students to transcend the areas where they effectively employ AI systems, thereby representing themselves as more tech-aspirant. In this connection, intermediate student holds that AI repositions them in a more advantageous situation and status than being within educational system in regard with access to modern and technologically updated body of knowledge ("...*what has been really fascinating for me is that I can learn what I like and this is a great chance to outpace the prolonged teaching at schools and universities...*" *[INT. St. 11]*). The transcending subject constructs their identity in close alignment with fast-paced evolving technology, giving rise to an aura of an evolutionary intellectual environment around AI tools.

Students as AI users

In the AI-affected educational landscape, a distinct group of intermediate and advanced students resists the notion of fully surrendering their educational identities to the rising prominence of AI in both learning and broader societal contexts. Assert that the traditional, institution-centred modes of education still form the bedrock of modern educational systems, and these students form their learner identity predominantly under the influence of the

conventional and existing educational system. From their perspective, even the most advanced, technology-driven approaches to learning and skill development remain fundamentally grounded in the established principles and values of traditional education.

INT. St. 12: I am well aware of the benefits of AI tools and system, but I don't like to fully accept them as substitutes for universities or schools. You know, these systems are yet to prove their maximum reliability. I personally cannot trust them fully and I think we should not be too fascinated with such technologies even though they are going great.

ADV. St. 7: I strongly believe in AI and modern technologies. But this does not mean that I have lost my belief in the conventional medium of education. I personally prefer to use AI in order to receive quick critical feedback on my writing, but I by no means like to switch off my mind and leave everything up to the AI systems. I don't like this.

ADV. St. 8. I think using AI has helped me improve and advance my writing skills, especially academic writing. But it does not feel good when you spare everything to AI and you stay away from thinking and producing. I think this is harmful. I personally keep a healthy balance between my personal production and the assistance I can get from AI. It is only this way that I have my inner content and at the same time keep up with the pace of technology.

For both intermediate and advanced students, the construction of their learner identities involves maintaining a careful balance between their agencies within conventional education systems and their interaction with cutting-edge technologies (*I personally prefer to use AI in order to receive quick critical feedback on my writing, but I by no means like to switch off my mind and leave everything up to the AI systems...*" [AVD. St. 7]; "*...I personally keep a healthy balance between my*

personal production and the assistance I can get from AI..." [ADV. St. 8]). Nonetheless, the intermediate student 12 constructs a technology skeptical identity by undermining the reliability and authenticity of AI's educational content ("*... You know, these systems are yet to prove their maximum reliability. I personally cannot trust them fully...*" [INT. St. 12). This student constructs their identity mainly in line with the predominant status of universities, endorsing the existing institutional supremacy in the field of education ("*...but I don't like to fully accept them as substitutes for universities or schools...*" [INT. St. 12].

Discussion

The findings of this study depict a transparent picture of how Iraqi EFL students perceive the use of AI tools in enhancing their writing skills and shaping their learning experiences. For many intermediate students, AI serves as a major source of aid, providing guidance when teachers aren't available. For them, the ubiquity of AI tools offers an instrumental and practical aid to their writing. These tools help students identify their mistakes, suggest corrections, and give them the confidence to improve. This aligns with previous studies that have shown how AI can enhance learning by giving students real-time support (Al-Raimi et al., 2024).

However, the role of AI in fostering independence or autonomy among learners is a bit more complex. Some students feel that relying on AI too much might limit their ability to think critically and develop skills on their own. While AI can certainly offer help, there's a concern that it might reduce students' sense of ownership over their learning journey. Advanced students, in particular, use AI more cautiously; they appreciate the help but understand that true autonomy comes from engaging deeply with the material. This idea echoes past research, which emphasizes the need

for learners to take responsibility for their own learning (Holec, 1981; Little, 1991).

Interestingly, students have different views on whether AI should complement or replace traditional education. Some feel that AI tools offer more relevant and up-to-date learning opportunities than what they get in the classroom, where content can sometimes feel outdated. Others see AI as a helpful addition to, but not a replacement for, the guidance they get from teachers. This reflects a broader debate in education about how technology should be integrated into learning. AI tools can indeed personalize learning, but they can't replicate the human interaction that's so valuable in the classroom (Kukulska-Hulme & Viberg, 2018; Hwang et al., 2020).

Another significant insight from the study is the emotional aspect of using AI tools. Many students feel less anxious when they use AI for writing, especially when compared to the stress of receiving feedback from teachers. AI tools provide a safe space for students to experiment and improve their writing without the fear of being judged. This stress-free environment is particularly beneficial for intermediate students, helping them build confidence in their abilities (Kohnke et al., 2025). For advanced students, AI tools not only save time but also give them peace of mind when they're working on important writing tasks, such as applications for universities.

Conclusion

This study sheds light on how AI tools are transforming the way Iraqi EFL students develop their writing skills and think about their roles as learners. AI is undoubtedly a powerful tool that can enhance students' writing by offering instant, detailed feedback. However, the question of autonomy is more complex. While some students see AI as a way to work independently of teachers,

others worry that relying too much on AI might hinder their ability to learn independently. Advanced students, in particular, value AI for its ability to refine their writing, but they also recognize that real autonomy comes from deep engagement with the material.

It's clear that AI tools have a valuable role to play in education, but they shouldn't be seen as replacements for traditional teaching. Instead, they should complement the work of teachers, helping students develop the skills and confidence they need to succeed. Moving forward, more research is needed to explore how AI can be used in ways that encourage students to take control of their learning without becoming overly dependent on these tools.

Educational institutions should also consider how best to integrate AI into their curricula, ensuring that students benefit from the personalized support AI offers, while still developing the critical thinking and self-reliance needed for long-term success. Educators should be trained to guide students in using AI effectively, helping them harness the benefits of these tools to become more independent, confident learners.

References

Ali, A. (2024). *Perceptions and potential: Investigating the integration of digital game-based language learning.* AUT Open Repository. openrepository.aut.ac.nz

Al-Raimi, M., Mudhsh, B. A., Al-Yafaei, Y., & Al-Maashani, S. (2024). Utilizing artificial intelligence tools for improving writing skills: Exploring Omani EFL learners' perspectives. *Forum for Linguistic Studies, 6*(2). https://doi.org/10.59400/fls.v6i2.1177

Alsager, H. (2024). To look from another window in education: Artificial intelligence assisted language learning and its reflections on academic demotivation, foreign language learning anxiety and autonomy. *Computer-Assisted Language Learning Electronic Journal, 25*(4), 124-147.

Banihashem, S. K., Kerman, N. T., Noroozi, O., Moon, J., & Drachsler, H. (2024). Feedback sources in essay writing: Peer-generated or AI-generated

feedback? *International Journal of Educational Technology in Higher Education, 21*(1), 23.

Benson, P. (2011). *Teaching and researching autonomy in language learning*. Routledge.

Benson, P., & Voller, P. (1997). *Autonomy and independence in language learning*. Longman.

Chatti, K. (2024). *Investigating the efficiency of using ChatGPT to generate ideas for writing on enhancing the EFL learners writing creativity: The case of Master one English students at University Mohammed Khider of Biskra* [Unpublished master's thesis]. University Mohamed Khider of Biskra.

Dam, L. (1995). *Learner autonomy: From theory to classroom practice*. Authentik.

Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry, 11*(4), 227-268.

Fathi, M., Vakili, K., Hajibeygi, R., Bahrami, A., Behzad, S., Tafazolimoghadam, A., ... & Gholamrezanezhad, A. (2024). Cultivating diagnostic clarity: The importance of reporting artificial intelligence confidence levels in radiologic diagnoses. *Clinical Imaging, 110356*.

Fitria, T. N. (2023). Artificial intelligence (AI) technology in OpenAI ChatGPT application: A review of ChatGPT in writing English essay. *ELT Forum: Journal of English Language Teaching, 12*(1), 44–58. https://doi.org/10.15294/elt.v12i1.64069

Gee, J. P. (2000). Identity as an analytic lens for research in education. *Review of Research in Education, 25*(1), 99-125.

Godwin-Jones, R. (2023). Emerging spaces for language learning: AI bots, ambient intelligence, and the metaverse. *Language Learning & Technology, 27*(2), 6–27. https://hdl.handle.net/10125/73501

Holec, H. (1981). *Autonomy and foreign language learning*. Pergamon.

Hwang, G.-J., Xie, H., Wah, B. W., & Gašević, D. (2020). Vision, challenges, roles and research issues of artificial intelligence in education. *Computers & Education: Artificial Intelligence, 1*, 10001. 10.1016/j.caeai.2020.100001

Javaid, M., Haleem, A., Singh, R. P., Khan, S., & Khan, I. H. (2023). Unlocking the opportunities through ChatGPT tool towards ameliorating the education system. *BenchCouncil Transactions on Benchmarks, Standards and Evaluations, 3*(2), 100115. https://doi.org/10.1016/j.tbench.2023.100115

Kim, N. Y. (2019). A study on the use of artificial intelligence chatbots for improving English grammar skills. *Journal of Digital Convergence, 17*(8).

Kohnke, L., Zou, D., & Su, F. (2025). Exploring the potential of GenAI for personalised English teaching: Learners' experiences and perceptions. *Computers and Education: Artificial Intelligence, 8*, 100371. https://doi.org/10.1016/j.caeai.2025.100371

Kukulska-Hulme, A., & Viberg, O. (2018). Mobile collaborative language learning: State of the art. *British Journal of Educational Technology, 49*(2), 207–218.

Little, D. (1991). *Learner autonomy 1: Definitions, issues and problems*. Authentik.

Little, D. (2007). Language learner autonomy: Some fundamental considerations revisited. *International Journal of Innovation in Language Learning and Teaching, 1*(1), 14-29.

Little, D. (2022). Language learner autonomy: Rethinking language teaching. *Language Teaching, 55*(1), 64-73.

Little, D., Dam, L., & Legenhausen, L. L. (2017). Language learner autonomy: What, why and how. *Second Language Acquisition, 4*(1), 1-21.

Littlewood, W. (1999). Defining and developing autonomy in East Asian contexts. *Applied Linguistics, 20*(1), 71–94. https://doi.org/10.1093/applin/20.1.71

Maroncelli, R., Rizzo, V., Pasculli, M., Cicciarelli, F., Macera, M., Galati, F., ... & Pediconi, F. (2024). Probing clarity: AI-generated simplified breast imaging reports for enhanced patient comprehension powered by ChatGPT-4o. *European Radiology Experimental, 8*(1), 124.

Marzuki, Widiati, U., Rusdin, D., Darwin, & Indrawati, I. (2023). The impact of AI writing tools on the content and organization of students' writing: EFL teachers' perspective. *Cogent Education, 10*(2), 2236469.

Mishchuk, I. M., Halapchuk-Tarnavska, O. M., & Yushak, V. M. (2024). The role of innovative technologies in teaching grammar to students. *Закарпатські філологічні студії, 2*(33).

Nguyen, N. T. (2014). *Learner autonomy in language learning: Teachers' beliefs* [Doctoral dissertation, Queensland University of Technology].

Norton, B. (2000). *Identity and language learning: Gender, ethnicity and educational change*. Longman/Pearson Education.

Oxford, R. L. (2003). Language learning styles and strategies: An overview. In D. E. Larson & J. E. Alatis (Eds.), *Georgetown University Round Table on Languages and Linguistics 2003* (pp. 1–25). Georgetown University Press.

Palfreyman, D., & Smith, R. C. (2003). *Learner autonomy across cultures: Language education perspectives.* Palgrave Macmillan.

Pavlenko, A., & Lantolf, J. (2001). Second language learning as participation and the reconstruction of selves. In J. Lantolf (Ed.), *Sociocultural theory and second language learning* (pp. 155-177). Oxford University Press.

Reinders, H., & White, C. J. (2016). 20 years of autonomy and technology: How far have we come and where to next? *Language Learning & Technology, 20*(2), 143–154.

Saltman, K. J. (2022). *The alienation of fact: Digital educational privatization, AI, and the false promise of bodies and numbers.* MIT Press.

Sanjaya, I. N. S., Wajdi, M., Sitawati, A. A. R., & Suciani, N. K. (2023). Indonesian EFL learners' motivation to learn second language pragmatics. *Indonesian Journal of EFL and Linguistics, 13,* 13-26.

Satvati, N., Kamali, J., Safian Boldaji, F., Khodadadi, M., & Akhondi, S. (2023). *Exploring the role of AI integration into language education in language teacher identity construction: An ecological perspective.* Available at SSRN 4670840.

Szabó, F., & Szoke, J. (2024). How does generative AI promote autonomy and inclusivity in language teaching? *ELT Journal, 78*(4), 478-488.

Vera, A. E. I., Mesías, E. P. L., & Paccha, M. (2024). Intelligent English grammar: AI strategies to master the rules. *Computer Assisted Language Learning, 27*(1), 70-105.

Vovk, O., & Kryvoshyia, D. (2024). Artificial intelligence in academic writing: Composing a for-and-against essay. *PrOsvita,* (1), 19-28.

Wei, L. (2023). Artificial intelligence in language instruction: Impact on English learning achievement, L2 motivation, and self-regulated learning. *Frontiers in Psychology, 14,* 1261955.

Yeh, Y. L., & Lan, Y. J. (2018). Fostering student autonomy in English learning through creations in a 3D virtual world. *Educational Technology Research and Development, 66,* 693-708.

Zaman, S., Hussain, M. S., & Tabassam, M. (2024). Use of artificial intelligence in education: English language teachers' identity negotiation in higher education. *Journal of Asian Development Studies, 13*(3), 861-869.

Zimmerman, B. J. (2002). Becoming a self-regulated learner: An overview. *Theory Into Practice, 41*(2), 64–70. https://doi.org/10.1207/s15430421tip4102_2

Zou, M., & Huang, L. (2024). The impact of ChatGPT on L2 writing and expected responses: Voice from doctoral students. *Education and Information Technologies, 29*(11), 13201-13219.