



الطلاب العراقيون يبدأون الكتابة الأكاديمية: أدوات الذكاء الاصطناعي كوسيلة مساعدة
Iraqi Students Startup Academic Writing: AI tools as an Aid

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Abstract

Technology has become an integral part of learners' lives recently, thanks to its ease of access and complete reliance on it, especially for academic purposes, where writing is a significant skill. This study is carried out in Iraq. The purpose is to find out how undergraduate Iraqi students feel about using AI for critical thinking and to improve their academic writing at the university level. The study was conducted on 50 female students and 20 male students enrolled in the Academic Writing course at Diyala University. Data are collected by a quantitative method design to the study, which uses AI and the Academic Writing Questionnaire (AI-AWQ), utilizing 20 items Likert scale Questionnaire and analyzed using SPSS 29 includes descriptive statistics and reliability assessment (Cronbach's Alpha= 0.83). The result shows a positive relationship between AI and better academic writing, and that most of the students cannot depend on AI tools as a human replacement. Finally, AI aid strategies related to dependency and task adaptation were found. These findings indicate the potential of AI tools aid in enhancing students' academic writing, side by side the need for traditional pedagogical guidance.

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المخلص

أصبحت التكنولوجيا جزءاً لا يتجزأ من حياة المتعلمين مؤخرًا، بفضل سهولة الوصول إليها والاعتماد الكامل عليها، لا سيما في المجال الأكاديمي حيث تُعد الكتابة مهارة أساسية. أجريت هذه الدراسة في العراق بهدف معرفة آراء طلاب المرحلة الجامعية الأولى العراقيين حول استخدام الذكاء الاصطناعي في التفكير النقدي وتحسين كتابتهم الأكاديمية. شملت الدراسة 50 طالبة و20 طالبًا مسجلين في مقرر الكتابة الأكاديمية بجامعة ديالى. جُمعت البيانات باستخدام منهج كمي، معتمدًا على الذكاء الاصطناعي واستبيان الكتابة الأكاديمية (AI-AWQ) المكون من 20 بندًا وفقًا لمقياس ليكرت. خُللت البيانات باستخدام برنامج SPSS 29، وشمل التحليل الإحصاء الوصفي وتقييم الموثوقية (معامل ألفا كرونباخ = 0.83). أظهرت النتائج وجود علاقة إيجابية بين الذكاء الاصطناعي وتحسين الكتابة الأكاديمية، وأن معظم الطلاب لا يستطيعون الاعتماد على أدوات الذكاء الاصطناعي كبديل عن العنصر البشري. كما كشفت الدراسة عن استراتيجيات مساعدة الذكاء الاصطناعي المتعلقة بالاعتماد على الذكاء الاصطناعي وتكييف المهام. تشير هذه النتائج إلى إمكانية استخدام أدوات الذكاء الاصطناعي للمساعدة في تحسين الكتابة الأكاديمية للطلاب، جنباً إلى جنب مع الحاجة إلى التوجيه التربوي التقليدي

Introduction

Writing is considered the the foundation of all language skills¹, as students in Iraq academically rely on it to the greatest extent in demonstrating mastery of other three skills. Especially, academic writing is an essential ability, particularly for college students who must write texts that are clear, well-structured, and academically demanding². However, a lot of Iraqi students continue to struggle with structuring complicated concepts, using proper academic standards, and expressing subtleties in English, which can impede their confidence and academic performance. Current research has demonstrated the increasing potential of generative AI tools, such as ChatGPT, to help Iraqi students with their writing. It incorporating into an Iraqi writing course at the university level has been shown to improve students' writing skills and critical thinking by promoting active participation in the writing process as opposed to passively accepting criticism (Tsengand Lin, 2004). Besides, Bahari (2026) demonstrates that AI helps international students with cognitive load management.”; a slight improvement was observed compared to conventional methods. An AI application is necessary for academic inspiration, grammar editing, and lexical development in the EFL context (AbdAlgane, et al., 2026). In contrast, and for better academic writing development and to achieve success without depending fully on involuntary ideas in Pakistan educational context creates balance between the pedagogical³ and AI (Rabia et al., 2023). In addition, learners turn to unwilling to collaborate with others to solve language barriers (Jaafar & Dzakiria, 2023) in case they end up excessively reliant on AI tools (Akanda & Talukder, 2026). Hence, the beneficial results of the majority of the findings centered on specific writing outcomes (Ismael, 2025). Current research identifies students in Iraq actively engaging AI tools for a better writing process and how AI tools develop their academic writing skills (Bustan & Yousif, 2023). The current study attempts to close this gap by investigating the tactics⁴ used by undergraduate EFL students when utilizing ChatGPT for academic writing assignments, as well as how these tactics affect their writing abilities, critical thinking, and learner autonomy. This study advances knowledge of how to successfully incorporate AI tools in the higher education of Iraqi students' writing instruction by concentrating on learners' cognitive and behavioral processes with AI. It also informs

pedagogical practices that support students' independent writing development as well as technology-enhanced learning. AI tools furnish learners with quick feedback for coherence, structure, grammar, and most importantly allowing them to make modifications and adjust on their own (Alharbi, 2023)

Purpose of this study

Recent studies mainly focus on AI influence on academic writing, which primarily focuses on grammar correction and student motivation. Few studies investigated the effect of AI on students' autonomy and motivation. Despite the separation of AI tools, students are not aware of how using AI tools for better academic writing. The purpose of the study is to look into how undergraduate EFL students use AI tools for help with their academic writing and to see how these tactics affect learner autonomy, critical thinking, and writing performance.

Research question

1. How do undergraduate Iraqi students employ AI tools in their academic writing?
2. How do these techniques impact students' writing quality, structure, and argumentation?
3. How do students' critical thinking and learner autonomy in writing assignments get affected by AI-supported strategies?
4. What difficulties do students face while utilizing AI technologies, and how do they modify their approaches as necessary?

Literature review

Utilizing AI tools in academic writing by Iraqi undergraduate students has received a lot of attention in recent studies, which have shown both potential benefits and challenges. Several studies have investigated the influence of AI tools on students' writing skills. Meanwhile, technology is better utilized by younger learners (Jeon, 2024) show that learners are more likely to support trust and ambition for writing in a foreign language. In the research by Almusharraf et al. (2025) in Saudi context teacher found that their students utilize AI as aid for the writing structure, also the participant suggest The faculty should develop a plan for using AI tool like how to guide students to the right direction for better writing skill. Students at various levels of ability formulate exact writing aims, create the same draft, and evaluate their progress Elghani & Asadzadeh-Maleki (2026), the results show that students showed significant progress from the student whom received traditional feedback with great satisfaction from the participant for quick and accurate response from AI tool aids. For Rensburg (2025), AI can offer solutions that indicate critical thinking, but not always crucial ones. According to Pum (2026), AI tools provided students with immediate and prompt feedback, making them unstressed and engaged in the writing procedure. Alnemrat et al.'s (2025) study shows that the teacher feedback hardly has a significant effect compared to AI feedback, and the learner can provide a significant difference. For individuals' power to think critically and behave in specific ways when facing different contexts, the characteristics will shape according to the situation, so the mind will come up with outstanding, deeper thinking (Lampert, 2007). The capacity of AI tools fosters learners' independence, and a resilient focus on the objective was greatly improved in the experience after discipline and guidance (Li & Wang, 2026)

Methodology

Participants and Setting

The participants in this research are Iraqi undergraduate students. The reason for selecting the participants are easy to reach; besides, all students are enrolled in an English academic writing lesson, and they already have prior exposure to AI tools, Participant

consisting of (50) 71.43 % female and (20) 28.57 male, from the first grade at the English department at the University of Diyala. All students already have an Academic writing lesson for the two courses, as all the students have passed the Academic Writing class of the first term.

Research Instrument

The study uses AI and the Academic Writing Questionnaire (AI-AWQ) (Khojasteh *et al* 2025); twenty items were selected and reworded to be suitable for the Iraqi students' context and to be in conformity with the researchers' aims, along with the performed adjustment. Quantitative descriptive-correlation research design to investigate undergraduate Iraqi EFL students' perceptions of using AI tools in academic writing and their impact on critical thinking, learner autonomy, and writing performance. The quantitative approach is selected because it can allow for measuring students' usage of AI tools, attitudes, and examining the relationship between AI use and writing related variables.

To satisfy the structural requirements of the study questions, all of the objects were categorized and placed into four categories. Two experts in the university reviewed and recommended the questionnaire's validity. A 5-point Likert scale was adopted on 5-points scale (strongly Disagree=1, Disagree=2, neutral=3, agree=4, strongly agree=5). The questionnaire was sent online to 120 participant but only 80 replies were collected. Cronbach's Alpha Formula, the reliability of the questionnaire was found to be 0.83

Procedure

The study adapted a quantitative descriptive-correlation research design to investigate undergraduate Iraqi EFL students' perceptions of using AI tools in academic writing and their impact on critical thinking, learner autonomy, and writing performance. The quantitative design is selected because it can allow for measuring students' usage of AI tools, attitudes, and examining the relationship between AI use and writing-related variables. The participants already know the required information for the study. Before sending google forms short introduction was given to the students in their classes. SPSS 29 initially investigated the validity and reliability of the AI-AWQ descriptive Statics then analyzed the data and research questions.

Results and Data Analysis

As the main purpose of this study is to examine how undergraduate EFL students use AI tools, students show a strong response to utilizing AI tools in general to aid in academic writing. Responses were collected throughout the research items for a questionnaire to answer the four questions of this research paper, after analysis of the data.

Table 1 shows the descriptive statistics for Utilizing AI for Academic Writing. Thus, items in this scale refer to the use of AI tools at different points of the writing steps. This involves developing up ideas for preparing to write and modifying Items includes "I use AI too create new topics" and " I use AI tools to help to generate ideas...", "Formulate sentence and paragraphs ..", "fix grammar and correct spelling", "(planning, drafting, revising)" and "develop the main idea for my topic". All these items are under the first hub. As Table 1 shows, the majority of the students 'strongly agree' and 'agree' with all the items in the Using AI Tools Scale. The means for the items are very close and in the range of 5.11 to 4.21. This finding indicates that all students utilize AI tools to aid them in the academic process.

Table 1: Response to using tools in Academic Writing

item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	MEAN
1	1	1	3	35	30	4.31
3	0	1	15	15	39	4.31
4	0	5	3	32	30	4.24
5	1	2	8	28	31	4.21
8	0	2	5	30	33	4.34

Table 2 shows descriptive statistics for the impact of AI tools on quality and structure. The items in this section represent the opinions of Iraqi students regarding how using AI technologies, such as 'coherence', 'organization', and 'clarity of their academic writing', thus, the items are under the second hub: using AI Tools in Academic Writing. This metric shows majority of the students highly 'strongly agree and' agree', which indicates how much AI tools help to improve the written text structure. The means for the items are very close and in the range of 4.3 to 4.31. This finding indicates that all students receive a great impact from AI tools on their quality and structure.

Table 2: Response to The Impact of AI on Writing Quality and Structure

item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	MEAN
2	1	2	8	23	36	4.3
6	0	1	6	33	30	4.31
7	1	0	3	25	41	4.5
9	1	2	3	33	31	4.3
10	0	3	7	29	31	4.25

As Table 3 shows, the descriptive statistics for the third hub: The Impact of AI Argumentation and Critical Thinking. The descriptive data for AI tools aid in critical thinking and argument development in academic writing. The entries in these items relate to how Iraqi students view AI tools as helping them strengthen their critical thinking abilities while working on academic writing assignments. These items show how much AI helps with idea analysis and the development of logical, evidence-based arguments. Items such as "AI tools help me analyze my ideas before writing...", "Using AI encourages me to think from multiple points of view when writing", and "AI helps me build stronger and more logical arguments in my academic writing" are some examples of items on this hub. The percentages of replies for each of the five-point Likert scale alternatives are displayed in Table 3. The majority of students had levels of "strongly agree" and "agree" as indicated in Table 3. There is a general positive trend among students about the function of AI tools in promoting critical thinking and boosting argument building in academic writing, as seen by the arithmetic means of the items ranging between 4.2 and 4.54. which are extremely near. These findings show that students view AI as more than just a way to produce texts; rather, they view it as a useful tool for honing analysis and evaluation skills.

Table 3: Response to the Impact of AI Argumentation and Critical Thinking

Item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	MEAN
11	3	1	2	37	27	4.2
12	2	0	3	30	35	4.37
13	1	3	6	23	37	4.54
14	8	5	15	27	15	3.5
15	0	3	11	27	29	4.17

As descriptive statistics, how using AI tools affects Iraqi students' learning independence. Students' opinions about how AI tools can improve their capacity to learn on their own and assume responsibility for finishing academic writing assignments are represented by the items in this hub. The degree to which AI supports the learner's independence during the preparation, performance, and revision of writing is reflected in this scale.

Items like “I use AI as an aid and not as a substitute for my personal effort,” “I use AI as an aid and not as a substitute for my personal effort,” and “AI encourages me to self-learn outside the classroom” are included in this hub. The percentages of replies for each of the five-point Likert scale alternatives are displayed in Table 4. as seen by the arithmetic means of the items ranging between 3.8 and 4.1. which are extremely near.

Table 4: Response to the Impact of AI Learner Autonomy

Item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	MEAN
16	0	1	18	29	22	4.02
17	1	9	25	14	21	3.64
18	1	8	2	31	28	4.1
19	2	10	6	34	18	3.8
20	6	7	11	23	23	3.71

Discussion

The purpose behind this research is to scrutinize where students in Iraq have utilized AI tools for academic writing, thus it affects their writing autonomy, creativity, and finally their outcomes. The descriptive analysis of the four hubs shows that students have promising thoughts concerning utilizing AI tools because the learners indeed use AI at different levels of academic writing stages, starting with creating ideas for a topic and organizing thoughts. Based on the first hub results, there is an increase in the realization of AIs' capability for improving writing skills, which indicates Iraqi learners can use an AI tool for better academic writing. For the second hub, results show the features and building of academic writing through strong coherence and well-set paragraph arrangements. This indicates that AI besides adjusting grammatical mistakes. In terms of the critical thinking third hub, students highlight that AI tools can form critical thinking, but as a served tool, not instead of human-mediate guide, the results are in line with (Rensburg, 2025). Students performing relying on or not relying on AI tools has the contrastive views from different researchers, while educators anticipate that some students embrace AI tool edits rather than examine them, resulting in weak writing (Tahir et al., 2025). The fourth hub's results show that students utilize AI tools as a module to boost self-reliance, considering that they can count solely on themselves, which is in line with Li & Wang (2026), who indicated that in recent academic settings, the independence of students surely developed with the AI release.

Conclusion

Depending on the results, Iraqi students prefer to use AI tools for better academic writing and are mostly interested in including AI tools in their Academic Writing program. The findings show that if the students use AI tools and techniques powerfully improved general coherence and structure of academic writing when used critically and ethically this significantly will works as a feedback to foster students' growth of higher-level thinking ability and self-revision technique. However, the current study shows AI tools must be used as an extra aid for learning, yet not a replacement for humanistic teaching. For future studies, use a specific AI tool to determine which specific chatbots are utilized for the purpose of enhancing academic writing skills. Therefore, to develop more exact pedagogical frameworks for AI integration in the higher education context, future researchers should focus on analyzing particular AI tools in enhancing specific academic writing, for example argumentative or opinion and coherence.

Reading, writing, speaking, listening

² Intellectual effort, advanced critical thinking, and significant time investment.

³ Releats all metods, technique Principles and procedures teacher use during teaching.

⁴ Procedure students follow in order to achie a specific goal.

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Appendix A

Dear students:



This questionnaire is set out to meet your usage of Artificial Intelligence to enhance your academic writing. by answering this items, your contribution will lead to the success of this research.

College name/ department:.....Stage level
Male/Female:.....

No.	Iems	Strongly agree	Agree	Neutral	Disagreed	Strongest disagree
1	I use AI to generate ideas for writing topics.					
2	AI aids my Academic writing to be more coherent and concise.					
3	I use AI tools to help create sentences and connect to the main idea.					
4	I use AI to fix my grammar structure and correct my spelling.					
5	I use AI at different stages of the writing process (planning, drafting, revising).					
6	Using AI has helped me strengthen the topic Iam writing about					
7	AI tools have helped me arrange ideas in order.					
8	I use AI to develop the main idea for my topic.					
9	AI has helped me write a clearer introduction and conclusion.					
10	I feel that my writing has improved because of using AI tools.					
11	AI helps me develop ideas supported by examples or explanations.					
12	Using AI encourages me to consider more than one perspective when writing.					
13	AI helps me analyze ideas before including them in the text.					
14	I feel that using AI enhances my ability to evaluate the quality of my ideas.					
15	AI tools have helped me improve the strength of my arguments in my writing.					
16	Using AI tools makes me more self-reliant in completing writing tasks.					
17	I can make better writing decisions when using AI.					
18	AI encourages me to learn independently outside of the classroom.					
19	I feel more in control of the writing process when using AI.					
20	I use AI as a learning support, not as a replacement for my own effort.					